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ABSTRACT

This report presents a 2-year, longitudinal evaluation of the effects of a major training program on two State Educational agencies and four local educational agencies. The program was designed to improve the process of organizational planning in educational systems. The evaluation procedure involved interviewing top administrators who underwent training four times over a 2-year period. Questionnaires were administered to these and to 40 additional key personnel. Additionally, an analysis was conducted of documents and samples that were produced through the training program and of the extent to which they were implemented. Assessed were 429 measures, including 133 measures of written documents produced through the training program and 296 produced through interviews/questionnaires. The achievement of the training program as evidenced by written documents proved to be only modestly successful. An assessment of the 296 interview/questionnaire measures found that in 36 cases the program in organizational planning had produced negative effects, in 222 cases it had produced no effects, and 38 cases positive effects. The findings indicated that as a result of the training program, top administrators and key decisionmakers at both the State educational agency level and at the local educational agency level did not, in general, change either their beliefs about organizational planning or their perceptions of how planning might be pursued by the organization. (Author/JF)

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EVALUATION REPORT
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SECOND YEAR EVALUATION OF AN AMERICAN MANAGEMENT ASSOCIATION PILOT PROGRAM: ADAPTING AND TESTING BUSINESS MANAGEMENT DEVELOPMENT PROGRAMS FOR EDUCATIONAL ADMINISTRATORS

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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SECOND YEAR EVALUATION OF AN AMERICAN MANAGEMENT ASSOCIATION PILOT PROGRAM: ADAPTING AND TESTING BUSINESS MANAGEMENT DEVELOPMENT PROGRAMS FOR EDUCATIONAL ADMINISTRATORS

This report is a two-year evaluation program designed to evaluate the American Management Association's (AMA) pilot project to apply modified management practices and techniques of business/industry to educational administrators. The first year's evaluation report was completed and submitted on October 4, 1971 under Project No. 0-0793, Grant No. OEG-0-70-5073.

PREFACE

Undertaking a report such as this almost inevitably becomes a complicated, frequently dismaying and occasionally exciting adventure in group research. This preface outlines the chronology and the division of responsibility for our study, and acknowledges the many contributions that produced it.

The project began in August, 1970 with a meeting between myself and Mr. Lynn Tanner at the Federal Executive Institute in Charlottesville, Virginia. Mr. Tanner was then a doctoral student in the Public Administration Program of the Maxwell School, Syracuse University. I was about to join the political science faculty at the same institution. At the end of our first meeting, an all-day session, we emerged with details of a new research design that was necessary to strengthen the AMA's original proposal and offer potentially greater validity to the research findings as they became available. We explored thoroughly all potential areas of measurement that might appropriately be included in the evaluation, eliminated many, added new ones, and strengthened some measures that we agreed were important but vulnerable.

At the end of the day, Mr. Tanner and I believed we had an intellectually sound, practically useful research methodology and set of research instruments. We could not, however, be certain that a control group would be added to the study. The American Management Association was very cooperative in aiding and insuring that a comparable State Education Agency that would not receive the training program would be included in the study. Top administrators in the two experimental states also were helpful in suggesting State Educational Agencies which they believed were comparable to their own and to the other experimental Educational Agency. With their help, the control group was secured by summer's end.

The job of field research began; Mr. Tanner was in the field at once, gathering the pre-training research data, conducting interviews and becoming acquainted with personnel of both the training organization and the States to be studied. In the year that followed, Mr. Tanner spent many days observing every phase of the training program, taking detailed notes on the material presented by the AMA during its program, and strengthening relationships with personnel of all participating organizations in order to gain a clear sense of events that unfolded as the program and the evaluative research proceeded.

Toward the end of June, 1971, all research data had been collected and the tedious job of processing the information began. The questionnaires were coded and submitted to computer analysis, not without the problems which usually occur at this stage of a research effort. Mr. Emanuel Wald, a doctoral student in Public Administration at Syracuse University, spent hours struggling with the problem of writing statistical programs, insuring their procedural integrity and applying the programs to our data.

At this juncture Mr. Kent Chabotar and Mr. Stephen Montgomery, both doctoral students in Public Administration, became directly involved with the initial AMA research project. Both had participated in the original meetings which set up the first year's evaluation project, but they had decided to concentrate on a second-year study of the training's on-site impacts rather than on the training program itself. To this end, they applied for, and received from the United States Office of Education, a grant to conduct this second-year evaluation.

Messrs. Chabotar and Montgomery began by helping to complete the first-year report. Theirs was the difficult task of assisting Mr. Tanner in content-coding the tape-recorded, open-ended interviews he had conducted. The research team deeply appreciates the secretarial help which the AMA generously provided for the onerous task of transcribing the first year's interview tapes into typescript.

The problem of Messrs. Tanner, Chabotar, and Montgomery was to develop a coding instrument that was fully understood and meaningful to all three, and then to use this instrument to code the interviews in a reliable fashion. After a great deal of deliberation, conflict and frustration, a viable instrument was produced and the coding was accomplished. At last the coded information was keypunched and subjected to computer analysis. We labored mightily here, for we were convinced that this research data must be treated with maximum rigor and in a manner that was equitable to all parties.

In writing the report itself, I wanted to produce a document that explicated as fully as possible the contents of the AMA program, how it was conducted, when it was implemented and with whom, and how much validity could be attributed to the research findings due to the nature of the underlying research design. I was equally concerned with choosing types of statistical analyses, and with how the results of analysis would be used to make decisions about the program's consequences during the first year of subsequent operation in the experimental organizations.

In order to clarify these concerns, Mr. Tanner and I worked, quite literally, night and day for 45 days. Great mounds of planning and program documents were provided by the AMA to Mr. Tanner; he had also taken many detailed notes as he observed the programs. In many cases, none of the documents provided precisely the information we needed about the underlying assumptions and design parameters of the training program. Consequently, we were forced to examine all of the material with a careful, critical eye.

Because of the press of time in writing the initial report, we felt it was impossible to produce a document authored equally by both of us. I took responsibility for writing the report, and did so. Mr. Tanner's assistance throughout this period was extremely crucial, for he spent many hours sharing his observational notes and providing other important information which could have been gained only in the field. Finally, after about 1600 man-hours of work the first year's report was finished and forwarded to the AMA and the Office of Education in October, 1971.

The second-year's evaluation effort as proposed by Mr. Montgomery and Mr. Chabotar and funded by the Office of Education began immediately after the first year evaluation had been submitted.

Meetings were arranged among Messrs. Montgomery, Chabotar, Tanner and myself to deepen Messrs. Montgomery and Chabotar's understanding of events during the first year of the evaluation and to lay groundwork for evaluating the second year. Mr. Montgomery, Mr. Chabotar and I were committed to improving the research process during the second year and to refining the research instruments used during the first year.

These meetings produced, to cite two examples, a reliability study of the research questionnaire and the inclusion of a second Control State. The latter was necessary because we had reason to believe that the original Control State would become involved in the AMA training program during the second year's evaluation. The questionnaire's reliability study was designed to insure that the instrument we had chosen would be reliable in the research setting. The research instrument had been used many times and carefully studied before we applied it to educational systems. Results of the reliability study in our setting were gratifying. It strengthened our confidence in the first year's findings and in the forthcoming findings of the second year.

A number of new measures were added for the second year study; these measures were geared to examine the output factors that could be attributed to the training program. We wanted to ask the question, "How much difference did the training program make in the output of the organization?" To our way of thinking, it was both appropriate and essential that this dimension be added to the second-year effort. By the end of the second year, at least one year and in some cases one and one-half years would have passed since the training program--enough time to enable us reasonably to expect organizational results from the training. We decided also to include the Local Education Agencies in the final or second year report for they had been excluded from the first year's study.

Messrs. Chabotar and Montgomery began almost immediately to gather the third and later the fourth blocks of research data. Given what I, as project director, had learned from the first year, Messrs. Montgomery and Chabotar and myself were able to work out a schedule which would enable us to complete the report before the official deadline for submission.

The second year's study incorporates many features of the first year's report and rests on that study.

Much of the report, particularly the introductory chapters and the chapter on research design rely heavily upon the first year's report. Frankly, I have made a number of contributions to the written text and must be held responsible for the overall tone and final interpretation of the results. Responsibility for any substantive errors in the portrayal of the AMA program, the analysis of the research design or the interpretation of statistical data must rest with me. In addition, new material has been added and key segments of the initial report have been elaborated. Since we were able to foresee the schedule which would be necessary to produce a final report on time, this second-year evaluation was written almost solely by Mr. Chabotar and Mr. Montgomery.

Having offered these caveats, I urge the reader to recognize that the time-consuming and frustrating production of a report which incorporates the first year study, builds and extends through another year the measurement of the variables studied originally, and adds and interprets new material from the second year, is almost entirely the consequence of the painstaking labors of Mr. Chabotar and Mr. Montgomery.

This preface would be woefully incomplete if we failed to acknowledge the help of Dr. Frank Marini, Director of the Public Administration Program at Syracuse University, and that of his extraordinary secretary, Mrs. Alondra Mariani.

On numerous occasions I took significant time from Dr. Marini's extremely busy schedule to discuss problems of our research. He was always helpful, offering useful suggestions without presumption and listening attentively. He is also to be thanked for his editorial work on the first year's report; Dr. Marini generously and at virtually any time and place reviewed my text, often disrupting both his personal and professional life to do so. During the second year of the study, Dr. Marini worked to insure that administrative and budgetary questions were resolved to the satisfaction of all parties, and often and willingly lent his ear for debriefing sessions similar to those of the first year.

Mrs. Alondra Mariani is largely responsible for keeping the research effort moving along. To her fell the difficult task of staying abreast of the accounting and administrative details of the project. She was unfailingly helpful despite the added burden that the research project laid upon her already heavy workload, and we are deeply indebted to her.

Finally, it should be added that, as research director, I was marvelously gratified to watch three graduate students work responsibly and intensely together: each made invaluable contributions to the research. As the most significant indication of the collaborative relationship they developed, each will prepare a doctoral dissertation that incorporates data developed during both years of the study. This is, to me, a remarkable achievement given the inherent competitiveness of graduate education and the tremendous ego investment that accompanies dissertation research. On these grounds alone, though many others could be added, it was gratifying to work closely with Messrs. Chabotar, Montgomery, and Tanner.

This preface set out to show the complexity of completing a research effort in what can be truly described as a temporary social system. As this report is completed, the members of this research team leave Syracuse University for posts across the U.S. Mr. Tanner has accepted an appointment as assistant professor of public administration at Florida International University; Mr. Montgomery becomes a consultant for planning and management development to the planning division of one of the experimental State Departments of Education in our study; Mr. Chabotar has been appointed an instructor in political science at Michigan State University, while I have joined the political science faculty of Louisiana State University at New Orleans.

I close this preface with mixed feelings, therefore; it marks the symbolic end of a two-year project which has been, from the start, turbulent, often fun, sometimes disappointing and marked by long hours of work.

Toward the end, the load was lightened by the ideas, support and empathy of my closest friend and confidante, Clare Donaher Kirkhart, who was willing to sacrifice many weeks of the first seven months of our marriage to this report.

Larry Kirkhart,
Research Director
July 17, 1972

New Orleans, Louisiana

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SUMMARY

This report presents a two-year, longitudinal evaluation of the effects of a major training program upon two State Educational Agencies and four Local Educational Agencies. The program was designed by the American Management Association to improve the process of organizational planning in educational systems.

An elaborate evaluation procedure was developed to provide a careful assessment of the consequences of the training program. Top administrators who underwent the major portion of the training effort were interviewed four times: once before training began and three times after the program was over. These interviews were spread evenly over a two-year period. In addition, questionnaires were administered to these same administrators and to approximately 40 additional key organizational personnel, at four intervals during the same period.

An analysis of samples of the planning documents which were produced through the training program and of the extent to which they were implemented was also made.

The research design involved a control group which provided a base of comparison in order to effectively determine the results of the program.

Both the State Educational Agencies and the Local Educational Agencies went through the training program and both levels were encompassed by the evaluation.

Every effort was made to design the study around the goals the training organization set out to achieve. In order to clarify the presentation of a complex set of empirical findings, the data were organized into three categories: Causal, Intervening and End-Result variables.

Causal variables were directly related to the stated goals of the training program; they were the results the AMA set out to accomplish. Intervening variables were defined as the modes in which the organization functioned internally; matters such as decision-making, leadership, and team-management were considered. Each of the factors we have called intervening variables were important considerations in the presentation of the AMA training effort.

End-Result variables are related to organizational output; progress toward the accomplishment of an objective spelled out in the organizational plan is one example; another would be attitudes and beliefs of organization members about progress toward accomplishing their objectives.

In each category, a large number of measures were assessed. This information is summarized in the table below. The reader will note that each category is broken into two sub-headings, assessment of written documents and interview/questionnaire data. The text offers an explanation of precisely how each sub-area was assessed. The written documents were judged against criteria which are regarded by professional personnel as essential elements in an effective written plan. The interview/questionnaire material was subjected to careful statistical analysis.

EVALUATION RESULTS

Area	Total No. of Measures	Results		
1. **Causal Variables**		Minimum	Moderate	Maximum
a. Written Documents	83	21	43	19
		Negative	No Effect	Positive
b. Interview/ Questionnaire Data	184	24	141	19
2. **Intervening Variables**		Negative	No Effect	Positive
a. Interview/ Questionnaire Data	94	11	66	17
3. **End-Result Variables**		Unaccept.		Acceptable
a. Written Documents	50	27		23
		Negative	No Effect	Positive
b. Interviews/ Questionnaire Data	18	1	15	2
	429			

A total of 429 measures were assessed, including 133 measures of written documents produced through the training program and 296 measures produced through interviews/questionnaires. Evaluation of the written planning documents was, at best, very difficult; thus every effort was made to be as generous as possible in interpreting and applying evaluative criteria. Based on this procedure, 48 of the measures were found to be at minimum level, 66 at a moderate level of development and 19 at the level we term acceptable or maximum. The latter implies that the organization under scrutiny produced a written statement that is unambiguous, clear and appropriately comprehensive; "moderate" implies that the written material was understandable but was, in almost all cases, incomplete. An "unacceptable" or "minimum" ranking indicates that the measured area was not addressed at all or done poorly.

We conclude, therefore, that achievement of the training program as evinced by written documents (organizational planning materials) was only modestly successful.

Finally, we assessed a total of 296 interview/questionnaire measures and found that in 36 cases the AMA program in organizational planning had produced negative effects, in 222 cases it had produced no effects, and in 38 cases positive effects.

This is an extraordinarily poor level of achievement by any standard. In short, as a result of the training program, top administrators and key decisionmakers at both the State Educational Agency level and the Local Educational Agency level did not, in general, change either their beliefs about organizational planning or their perceptions of how planning might be pursued by the organization.

The text that follows comprehensively analyzes how the AMA effort affected each of the six experimental organizations. Briefly, what occurred is this: On the basis of the before-training measures, one of the experimental organizations began at a much higher level of performance than did the other five. At the close of our study, it was the only organization to show even modest improvement as a consequence of the program.

Overall, we are forced to conclude that the AMA training effort was unsuccessful during these two years. Given the cost of the program, the large number of manhours it absorbed, and the major investment of scarce human energy it required, we conclude that the program's rewards are insufficient to warrant the investment of public funds.

PART I

ADAPTING AND TESTING BUSINESS MANAGEMENT PROGRAMS FOR EDUCATIONAL ADMINISTRATORS

INTRODUCTION

In a fascinating study of the political vagaries and administrative vicissitudes that accompanied implementation of the 1965 Elementary and Secondary Education Act, Stephen Bailey and Edith Mosher comment:

> When ESEA was in its first weeks and months of implementation . . . the infrastructure of systematic program evaluation was either nonexistent or woefully primitive.[1]

Since American educators have been preoccupied with problems of evaluation for over 75 years, producing hundreds of books, articles, case studies and research reports on the issue, such a statement is unsettling.[2]

But it is essentially correct. Much of what has passed for evaluation has been judged mediocre at best.[3] Individual student or cohort performance has been overemphasized at the expense of program, school district, or larger concerns. The absence of an intermediate level of analysis often forced a shotgun marriage between subjective descriptions and data displays or computer printouts, yet forged no logical supporting links between them.[4] Judgments of effectiveness were based on evaluations of varied input data (student/teacher ratios, per pupil expenditures, etc.) with only passing consideration of the educational system's output, of its actual accomplishments.[5]

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[1] Stephen K. Bailey and Edith Mosher, ESEA: The Office of Education Administers a Law (Syracuse: Syracuse University Press, 1968), p. 102.

[2] See J. M. Rice, "The Futility of the Spelling Grind," Forum, XXIII (April/June, 1897), pp. 163-172, 409-419; Standards and Tests for the Measurement of the Efficiency of Schools and School Systems, 15th Yearbook of the National Society for the Study of Education, Part 2 (Chicago: University of Chicago Press, 1916); L. J. Cronbach, "Course Improvement Through Evaluation," Teachers College Record, LXIV (May, 1963), pp. 672-683.

[3] See Marvin Bressler and Melvin Tumin, Evaluation of the Effectiveness of Educational Systems, Vol. I (Princeton, N.J.: Princeton University Press, 1969); Orville F. Poland, "Why Does Public Administration Ignore Evaluation?" Public Administration Review, XXXI, 2 (March/April, 1971), p. 201.

This last concern expresses what in our view is the most significant limitation of current evaluations: the failure to compare precisely promise with performance so as to separate effective from ineffective programs.

> It is odd with so much investment of hope we know so little about the precise nature of the interrelationships between stated aims and actual outcomes. Apparently we now lack both the intellectual apparatus--i.e. standards, theories, concepts, indicators, tests, and new data--and sufficient will that will permit us to distinguish a 'success' from a 'failure.'[6]

Without such tools, we cannot be certain that the projects we sponsor (whether AMA training programs or reading programs for inner-city children) are really worth our money. Recent negative findings about some aspects of performance contracting make it clear that no easy solutions exist.

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[4] In *Organizations* (New York: Wiley & Sons, 1958), March and Simon discuss the application of a means-end chain connecting nonoperational organizational goals and individual task assignments as an aid to program evaluation.

[5] For examples of this input oriented approach see: National Study of Secondary School Standards, *Evaluative Criteria* (Washington, D.C., 1960); North Central Association of Colleges and Secondary Schools, *Policies and Criteria for the Approval of Secondary Schools* (Commission on Secondary Schools, 1965-66) as noted by Henry Dyer, *State-Wide Evaluation - What are the Priorities?* (Princeton, N.J.: Educational Testing Service, 1969), p. 8. See also Norman Kurland, "Developing Indicators of Educational Performance," a lecture presented at the 31st Educational Conference sponsored by the Educational Record Bureau (October, 1966), for a critique of this approach.

[6] Bressler and Tumin, op. cit., p. 2.

The evaluative situation has been improving, however. The involvement of experimental states in the AMA training program indicates that state and local education agencies are moving toward comprehensive assessment of where they are, where they want to go, and how they will recognize the goal when they reach it.[7] This phenomenon is caused partly by federal guidelines that require systematic program evaluation.[8] It has been influenced by improved evaluations in the literature.[9] But mostly it emerges from urgent awareness that we must be able to assess whether the programs we administer and the projects we fund are helping the children we teach and reaching the goals we set.

This trend can be demonstrated, at least in part, through growing emphasis on testing in statewide assessment programs. A 1968 Educational Testing Service survey showed that 74 such testing programs already existed in 42 states, with 18 states offering 2 or more programs. Twenty-two (22) of the reporting states were concerned primarily to provide schools with tests for use in guidance; 17 supplied tests as a means of instructional evaluation; and 13 stressed the evaluation of individual student progress.[10] More recent evidence indicates that not only are more testing programs being administered in more states and localities, but student achievement is more heavily stressed as well.

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[7] The evaluative efforts of several state educational agencies are described in Joan S. Beers, Educational Quality Assessment: The Ten Goals of Quality Education (Harrisburg: Pennsylvania Department of Education, 1970); James Mitchell et al., Program Planning and Evaluation (Des Moines, Iowa: State Department of Public Instruction, 1971); Keith Crusi, Educational Needs Assessment: A Statewide Design for Texas (Austin: State Education Agency, 1971); California School Boards Association, Implementation & CSBA (Sacramento, 1968).

[8] Elementary and Secondary Education Act, Public Law 89-10, 89th Congress, HR 2362, Sec. 205(a), (5) and (6); see also: Norman Thomas, "Politics, Administration, and American Education," Public Administration Review, XXX, 6 (November/December, 1970), p. 649.

[9] For a nonrepresentative sample of the more recent studies see Joint Federal/State Task Force on Evaluation, Comprehensive Evaluation System: Current Status and Developmental Requirements (Washington, D.C.: Scientific Educational Systems, Inc., 1970); Jack C. Merwin, "Evaluation Designs and Instruments," from a symposium "The World of Evaluation Needs Reshaping" at the annual meeting of AERA (February, 1969); James W. Guthrie, "A Survey of School Effectiveness Studies," a paper presented at the annual meeting of AERA (March, 1970).

In program evaluation, as in public administration generally, there is no "one best way." The alternative techniques and criteria are too numerous to be listed here. As C. Robert Pace points out: ". . . the characteristics of good evaluation differ depending on what is being evaluated, why, and by whom. Evaluation cannot be described by a single set of rules."[11] Yet approaches to evaluation generally rest upon three preconditions of empirical methods:[12]

1. Reliability: Whatever the evaluative instruments measure, they measure consistently.
2. Validity: The instruments measure what they are supposed to measure.
3. Relevance: Evaluation results are germane to experiential problems, not merely to theoretical constructs. Whenever evidence produced by an instrument continually fails to affirm experiential observations and theory derived from it, the evaluation itself may appropriately be questioned.[13]

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[10] Educational Testing Service, *State Testing Programs: A Survey of Functions, Tests, Materials, and Services* (Princeton, N.J., 1968).

[11] C. Robert Pace, *Evaluation Perspectives 1968* (Los Angeles: Center for the Study of Evaluation, University of California at Los Angeles, 1968).

[12] Adapted from Ben K. Gold, "Evaluation of Programs," paper presented at a conference sponsored by the Compensatory Education Project, Coordinating Board, Texas College and University System, 5-6 April 1971.

[13] Egon G. Guba provided us with a dramatic example at the 1969 AERA meeting. It concerned the "evaluation" of the Higher Horizons program in New York City. "Test

Even the most valid, reliable, relevant evaluation plan will fail unless the evaluators carefully administer it, and unless the people being evaluated appreciate the plan's usefulness and commit themselves to implementing it. This commonplace is rarely realized in the field. According to Robert Randall, there is "a timeworn and oft-recurring spectacle of the frantic but finally productive researcher-evaluator, who rushed into the executive offices with his data analysis finally complete, his report prepared and in hand, only to find that the executives, several months previously, had made the important decisions that locked up the monies and committed the organization for the ensuing months ahead."[14]

Finally, all parties must realize that while more should be demanded of evaluation theory and practice than we have so far received, we should not err by demanding more than evaluation can give.[15] Problems in controlling for environmental determinants,[16] unanticipated interventions, respondent bias, political influences[17] etc., make

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data failed to affirm what supervisors, teachers, and clients insisted was true--that the program was making a difference so great that it simply could not be abandoned."

[14] Robert S. Randall, "Knowledge About Decision Processes and Information," paper presented at the annual meeting of AERA (February, 1969).

[15] Henry Dyer, "How Precise Can Measurement Be?" in Evaluation and Christian Education (New York: National Council of Churches, 1960); Robert E. Stake, "Language, Rationality, and Assessment," in Walcott Beatty (ed.), Improving Educational Assessment and an Inventory of Measures of Affective Behavior (Washington, D.C.: Association for Supervision and Curriculum Development, 1969), pp. 35ff.

[16] See Austin D. Swanson, "Cost-Utility Analysis and Educational Decision-Making," in Gerald G. Mansergh, Systems Approaches to the Management of Public Education (Detroit: Metropolitan Detroit Bureau of School Studies, Inc., 1969), pp. 15-16; see also: Paul R. Mott and Orlando Furno, Theory and Synthesis of a Sequential Simplex: A Model for Assessing the Effectiveness of Administrative Policies (New York: The Institute of Administrative Research, Teachers College, Columbia University, 1960). Mott and Furno conclude that about 2/3 of the variance in educational output is due to the environment, leaving only 1/3 of the variance to be explained by decisions of school boards and administrators.

[17] J. R. Schlesinger, Systems Analysis and the Political Process (Santa Monica, California: The RAND Corporation,

attempts to give "money-back guarantees" of any evaluation, particularly in education, fatuous. On the other hand, the need for educational evaluation is so pressing that any attempt, however approximate, seems more useful than none.

The present report continues evaluation of the American Management Association's pilot project to apply to educational administration modified management and planning techniques drawn from business and industry. The report is divided into three parts.

Part I reviews the AMA's training program, "Adapting and Testing Business Management Development Programs for Educational Administrators," which was funded by the USOE (Contract # OEG-0-70-5070) during the period 7/1/70-6/30/71. The First year's evaluation (Y1)(1970-1971) and findings[18] are also reviewed and the focus of the present evaluation (Y2)(1971-1972) will be presented. This section intends to provide an overview of the training project and the two-year evaluation.

Part II details the research methodology of this project. The relationship between the First and Second year's evaluations is presented, together with the design, methodologies, data-gathering techniques, and statistical tools employed. Attention will also be given to questions of validity and their implications for our summary findings.

Part III presents the findings and analysis of the evaluation project. Again, the connection between the First and Second year evaluation projects is emphasized. As in the first year evaluation, most of the present evaluation studies the impact of training on the State Education Departments (SED's). The training program's

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1967), pp. 7, 29. See also: Aaron Wildavsky, "The Political Economy of Efficiency: Cost Benefit Analysis, Systems Analysis, and Program Budgeting," Public Administration Review (December, 1966), pp. 292-310.

[18] This report was submitted to the Office of Education with only Frank Marini's name on the cover page; it was, however, never Dr. Marini's intent to receive credit for authorship of the report. The cover page appeared as it did simply because of a misunderstanding of legal requirements.

The report was actually authored by Larry Kirkhart, the research director, and Mr. Lynn Tanner. Hereafter the present report will refer to the Kirkhart and Tanner authorship. Larry Kirkhart and W. Lynn Tanner, "Evaluation for Center for Planning and Development of the American Management Association." Report submitted to the American effect on local Educational Agencies (LEA's) will be presented for both years since no evaluation of the impact of training on LEA's was offered in the first year's report.

Management Association and the United States Office of Education, Syracuse University, October, 1971.

CHAPTER ONE

THE AMERICAN MANAGEMENT ASSOCIATION'S PROGRAM DESIGN AND ITS EVALUATION

Section 1: The American Management Association's Proposal of 1970

The AMA's initial proposal rested on the proposition that certain business management practices and skills could be modified and effectively applied to education. After some observation and discussion with educational administrators, the AMA had concluded that:

> . . . most school administrators need to improve their knowledge of the theories as well as develop their skills in applying the practices of management . . . that knowledge of the means, plus skills, plus motivation for effective implementation of means to solve problems, are needed administrative capabilities in the nation's educational systems.[1]

Specifically, the proposal set forth two objectives:

1) determining the feasibility of developing and applying the AMA's management development programs to education and

2) to introduce the educational programs into representative multi-state, multi-level groups of educational administrators.[2]

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[1] Feasibility and Pilot Program Proposal: Adapting and Testing Business Management Development Programs for Educational Administrators," American Management Association, June 22, 1970 (Mimeographed), pp. 2-3.

[2] Ibid., p. 4.

Organizations involved in the pilot project were two state departments of education and four local school districts, two in each of two states.

The proposal listed fourteen specific training goals. Each participating state education agency would demonstrate to an independent team of reviewers the degree to which these goals had been reached. It was not assumed that all the goals would be fully realized during the first year.

The goals were:

1) an agreed-upon definition of the agency's mission,

2) established, continuing objectives and planning procedures for long-range achievement of the institution's mission,

3) identified resources and constraints,

4) differentiated between where the institution is going and where it wants to go,

5) modified previously established objectives,

6) identified and analyzed alternative courses of action,

7) determined priorities,

8) made strategic action assignments,

9) defined standards of performance for key administrators,

10) specified task completion dates,

11) designed supplementary planning efforts,

12) assigned responsibilities to subordinate units,

13) designed a methodology by which future performance may be evaluated in relation to the performance specified in the plan,

14) produced and are implementing a long-range strategic plan.[3]

Section 2: The Training Format[4]

To achieve these goals the AMA utilized a format of training developed over a number of years of work with business organizations. The training program package was divided into three distinct parts and adapted to the special needs of the educational agencies.

Program components were (1) the Management Course for Presidents (MCP), (2) the Top Management Briefing (TMB), and (3) the Educational Planning Process (EPP). These were presented in order to each state department of education, though the local educational agencies were not offered the MCP.

The three programs are described below with special emphasis on their design and content.

	1. The Management Course for Presidents (MCP)
Change Target:	State Superintendent of Education
Duration:	4½ days
Location:	AMA Grove Training Center in Hamilton, New York
Type of Program:	Stranger Training Situation. Designed for chief executives who represent their organizations. Rarely does more than one participant from the same organization enroll. Total number of participants is approximately 24, including the trainer.

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[3] *Ibid.*, pp. 4-5.

[4] For a more detailed discussion of the training strategies employed by the AMA the reader is directed to the First Year's Evaluation Report. Larry Kirkhart and W. Lynn Tanner, "Evaluation for Center for Planning and Development of the American Management Association." Report submitted to the American Management Association and the United States Office of Education, Syracuse University, October, 1971. See especially Chapter One, "Professionalizing Management and Planning: A Strategy for Change."

Program Goal: As stated in the AMA's handbook the MCP is designed ". . . to bring top-management people up-to-date on the status of management as a profession, and to acquaint them with the kind of formal education and training that is available to the professional manager."[5]

Program Content, Learning Format, and Input Control:

Training Content	% of Program Time	Learning Format	Input Controlled by[6]
(In order presented) #1- Management Theory & Practice - Management as a Profession - Principles of Management - Pattern of Management Action - Major skill of Management - Management Ethics	13.4	Lectures by AMA representatives	AMA
#2- Communication - Leadership Communications	7.1	Supplemented with visual aids	
#3- Planning - Setting Corp. Objectives - Strategic & Operational Planning	14.3		
#4- Organization Theory & Practice - Manager Manpower Planning	13.4	Occasional didactic interaction with	

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[5] "Purpose of a Presidents Association Management Briefing." Taken from notebook material distributed by the AMA in The Presidents Association Notebook, American Management Association, 1970.

[6] This listing of program content was developed by the First Year's research team. Kirkhart and Tanner, op. cit., p. 6.

- Organizing Management Team #5- Climate - Motivating Management Team - Climate for Growth of Top Management Personnel		lecturer or other participants ↓	↓
#6- Control - Controlling Management Team - Developing Managerial Standards of Performance - Implementing Concept of Professional Mgm't.	17.0	↓	↓
#7- Leadership - Assuring a Dynamic Organization	7.1	↓	↓
General Discussions #1- Mgm't. Theory #2- Planning	12.5	Led by AMA representative; orientation: client to client reactions	Primarily AMA Secondarily by client
Small Group Discussion #1- Planning	2.7	Leaderless, task oriented groups. Client to client reactions	Shared between AMA and client

2. Top Management Briefing (TMB)

Change Targets: Program presented to the most influential organizational members of SEA and Local School Districts: State Superintendent and eleven of his associates/deputies.

The Director of Program Services in each state and

eleven of his subordinates.
From each of the Local School Districts the Superintendent and his eleven most important advisors.
Total personnel involved: Approximately 48.

Duration: 3½ days - Presentations made separately to State Department personnel and then to Local Educational Agency personnel in each state.

Location: At training site near focal organization

Type of Program: A Modified Diagonal Program. The sessions were composed of members from the same organization, but different ranks and from different departments. However because of the special nature of the organizations involved there were cases where persons from the same department were present at the sessions.

Program Goals: The primary purposes of the TMP was to spread knowledge of modern management practices throughout key roles in SEA and Local School Districts and:

1. to motivate educators to consider the application of principles, policies, and purposes of modern management;
2. to develop a practical, results-oriented centrum of knowhow and experience upon which administrators may draw to cope effectively with current problems in educational administration; and
3. to create a means through which administrators may exchange information as to the effectiveness of various approaches to particular problems and minimize duplication of experimentation and repetitious failures.[7]

Program Content, Learning Format, and Input Control:

Training Content	% of Program Time	Learning Format	Input Controlled by[8]
#1- Management Theory & Practice - Management as a Profession	13.8	Lectures by AMA representatives	AMA

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[7] American Management Association, "Feasibility and Pilot Program Proposal," op. cit., p. 6.

[8] Kirkhart and Tanner, op. cit., p. 9.

- Principles of Management - Pattern of Management Action - Major Skill of Management - Management Ethics		Supplemented with visual aids	
#2- Planning - Strategic and Operational Planning	11.6		
#3- Organization Theory & Practice - Organizing the Mgmt. Team	10.5t	Occasional didactic interaction with lecturer or other participants	
#4- Climate - Assuring Dynamic Organization - Growth of Management Personnel			
#5- Control - Controlling the Mgmt. Team - Developing Managerial Standards of Performance			
#6- Training - Preview of Strategic Educational Planning Process (to be held in Hamilton, New York)			
#7- Leadership - Styles of Leadership - Application of Mgmt. Principles to Education		↓	↓
General Discussions #1- Group Leaders Reports on "Organizing Mgmt. Team" #2- Summary & Conclusions: TMB #3- TMB Program Feedback	12.6	Led by AMA representative; orientation: client to client reactions	Primarily AMA Secondarily by client

Small Group Discussion #1- Organizing the Mgmt. Team	7.4	Leaderless, task oriented groups. Orientation: client to client reactions	Shared between AMA and client

3. Educational Planning Process (EPP)

Change Targets:	Program presented to Top Management groups who were viewed as crucial to the implementation of program in each state: State Superintendent and eleven of his associates/deputies. The Director of Program Services in each state and eleven of his subordinates, and separately to two local school superintendents and eleven of their subordinates. Total persons involved: 48.
Duration:	Two 5 day training sessions separated by at least 4 weeks for each of the four groups in each state.
Location:	AMA Grove Training Center in Hamilton, New York.
Type of Program:	Family Program. Composition of the program participants made up of organizational leader and his subordinates.
Program Goals:	Build an effective work group which would do the following: First Week: 1. develop a definition of the agency's mission 2. analyze the agency's resources 3. establish continuing objectives for the agency 4. develop specific objectives and set priorities 5. determine informational needs to evaluate alternative courses of action

6. assign specific data gathering tasks and set due dates.

Second Week:
1. define planning gaps - the difference between where the agency is and where it wants to go
2. modify preliminary objectives
3. analyze alternative courses of action open to the agency
4. finalize priority decisions
5. develop specific action assignments and supporting standards of performance and estimated times of completion.[9]

Program Content, Learning Format, and Input Control:

	Training Content	% of Program Time	Learning Format	Input Controlled by[10]
FIRST TRAINING SESSION	#1- Mission - Organizations function - Justification for Continued Societal Support - Focus for Resources to be Applied #2- Internal Analysis - Nature of Institution - Capability & Limitations - Factors under Institutional Control - Organization - Beliefs - Characteristics - Functions - Resources - Strengths - Weaknesses	Variable and situational, depending upon problems All areas to be covered as completely as possible by end of week. ↓	Parameters of learning process, steps and procedures defined by AMA. Client learning to occur through interpersonal interaction--client to client and client to AMA resource person. All learning outcomes	AMA and client (Discussion of boundaries and depth largely controlled by AMA representative; specific problems, documents, organizational contexts, and organizational processes defined by client)

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[9] AMA, "Feasibility and Pilot Program Proposal," op. cit., pp. 7-11.

[10] Kirkhart and Tanner, op. cit., pp. 14-15.

	#3- External Analysis
	- Factors Outside the Control of the Organization (i.e. external constraints)
	  - Trends
	  - Rate of Change
	  - Kind of Change
	- Assumptions About Future
	#4- Objectives
	- Desired Results or Ends
	  - Quantitative Terms
	  - Specify Means for Evaluation
	  - Short, Long Range or Continued Objectives
	  - Differentiation of Ends from Means
	#5- Intersession Assignments
	- Data Necessary to Development of Strategies to Accomplish Each Objective
	  - Historical Perform. Data
	  - Cost Data for Cost/Benefit Analysis of Alternatives
	- Data Necessary for Organizational Evaluation
		↓	are the responsibility of the client (not AMA).
			↓
				↓

Intersession Break: Return to Organization for Minimum of four weeks				
	#6- Priorities - Priority Ranking of Objectives Based on Team Evaluation of	↓	↓	↓

SECOND TRAINING PROGRAM	Resource Allocation - Sense of Urgency - Cost of Implementation - Probability of Success - Long-term vs. Short-term Benefit - Public Demands #7- Strategies - Means to Achieve Results Specified in Objectives - Development of Alternatives - Cost/Benefit Analysis Before Strategy Decision #8- Programs - Specific Results - Delegation to a Person - Acceptable Target Date (mutually agreed) - Sum of all Programs Equal to Results Anticipated in Specific Objectives #9- Planning Schedule - Schedule of Events & Target Dates - Insure Planning is "Way of Life"	↓	↓	↓

Section 3: The AMA Strategy for Change

In analyzing the AMA's training process and its potential impact on organizational systems, two factors were thought critical. First, the type of training program was viewed as affecting the program's effect on organizational behavior and goal attainment. Second, how the program was implemented reflected basic beliefs about attitude change and in turn affected the possibility of changing trainee attitudes.[11]

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[11] Ibid., pp. 30-34.

The Y1 research team determined that the program was implemented primarily by means of attitude change through the trainees' compliance and identification with concepts, experiences, and values presented by the AMA.[12] This method may be contrasted with seeking attitude change through internalization of change.[13]

The methods of input control used in the training indicated that if any attitudes were to be changed, they would alter through compliance and identification. As indicated in the display of the training format above, approximately 80% of program time was controlled by the AMA lecturer. In this context, for change to occur, the training participants must comply and identify with the concepts, experiences, and values presented by the trainer. As the first year's evaluation pointed out, this process can be termed an informational method of change, a method heavily dependent on the quality of the information imparted to the client and on the client's need for that specific information.

The Educational Planning Process (EPP) program differed from the MCP and TMB by dispersing control over program input. However, the primary means of obtaining attitudinal change was again defined as compliance and identification. Although the EPP input was largely determined by the client group, who were invited to discuss organizational issues, goals, interaction of administrators with each other, etc., the trainer acted to establish and clarify the boundaries of legitimate discussion and insured that each step of the planning process, as defined by the AMA, was accomplished as fully as possible. An attempt was made to maximize the level of rational dialogue and exchange of opinion.[14] Because the possibility of internalization of attitude change is optimized when both logical discussion and affect are considered, the first year research team did not believe that internalized attitude change would be produced in the EPP.[15] However, because this family or team program involved an organizational superior and his subordinates, any changes due to the training program were viewed as products of the EPP's impact on role relationships and group standards.

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[12] Ibid., p. 127.

[13] In analyzing the AMA's approach toward attitude change, the First Year's research team developed a typology of attitude change composed of compliance, identification, and internalization. Compliance was defined as learning to say or do the expected thing regardless of the individual's private beliefs. Change through identification was defined as acceptance both privately and publicly which is evoked when the individual is acting within the relationship upon which the identification is based. Change through internalization, on the other hand, was defined as the acceptance of influence from outside forces because the nature of the influence is congruent with the person's value system. These concepts were drawn from: Herbert C. Kelman, "Processes of Opinion Change," Public Opinion Quarterly, XXV (Spring, 1961), pp. 57-78. Ibid., p. 34.

Based on an analysis of five different types of training programs the Y1 research team classified the AMA programs as follows:[16]

	Change Emphasis of AMA Program		
Type of Training Program	Individual Awareness Knowledge	Inter-Personal Expectations of Role Relations & Group Standards	Inter-Group Standards of Appropriate Relationships
Stranger Program: MCP	Primary		
Diagonal Program: TMB	Primary	Tertiary	Secondary
Family Program: EPP	Secondary	Primary	Tertiary

[17]

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[14] Kirkhart and Tanner, op. cit., p. 128.

[15] Ibid.

[16] Other types of training programs analyzed were the Cousin Program which, like those mentioned in the text, was adopted from Warren Bennis, Changing Organizations (New York, 1966), pp. 120-121 and the Inter-Department Program adopted from Jack Fordyce and Raymond Weil, Managing With People (Reading, Mass., 1971), pp. 124-130. Ibid., pp. 31-33.

[17] This chart was adopted from the First Year's report. Ibid., p. 35.

In the stranger program (MCP), potential organizational change depends on the capacity of a single person to return to the organization and change it. In the diagonal program (TMB), most of the potential for change is based on the capacity of individuals who return to highly influential roles in the organization and effect changes based on their new knowledge and awareness. The family program (EPP) seemed most promising since one goal of the program was to cause changes in expectations about role relationships and group standards of behavior among the management teams involved in the training.

Based on the assumption that the likelihood of organizational impact is related to training design and the number and types of people who trained, the Y1 research team concluded that the greatest impact and the linkages between the training and organizational change were in (1) individual awareness/knowledge and (2) interpersonal expectations of role relationships and group standards.[18] These variables are the channels for transmitting change which the AMA program depended upon to introduce and support more effective planning.

Section 4: The First Year's Evaluation (Y1)

For the purposes of the Y1's evaluation the research team placed primary emphasis on measuring the outcomes of the Educational Planning Process, a decision taken for several reasons. First, the EPP training program objectives were most directly related to the outcome goals stated by the AMA for the entire pilot project.[19] (See page 12 of this report for a list of these outcome goals.)

Second, the EPP was designated as the ". . . most potent force of organizational change . . ." in the program packages offered by the AMA.[20] This program was the beneficiary of whatever change occurred in the MCP and TM . In addition, the EPP program format gave participants time to return to their organizations to continue the processes begun during the first week of the EPP. This procedure provided the greatest potential for effecting change in the organizations.[21]

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[18] Ibid., p. 36.

[19] See page 12 of this report for a list of these outcome goals.

[20] Kirkhart and Tanner, op. cit., p. 129.

Finally, as a family program the EPP seemed most likely to encourage change through the conceptual linkages of (1) role relations and group standards and (2) individual awareness/knowledge. For change in the organizations to occur, it would have to be transmitted through changes in these attitudes.[22]

Thus, based on the analysis of the training design and methods of implementation, the Y1 evaluation centered on the problem of measuring (1) changes in individual awareness/knowledge and (2) changes in interpersonal expectations of role relationships and group standards. The measures of these areas were related to the goals of training in order to assess the impact of the program.

Since the AMA program had been completed only a short time before the Y1 evaluation, the research team felt it was inappropriate to explore the question to what extent the plans prepared during the EPP were being acted upon in the experimental organizations.

We emphasized the attitudinal change which would be a necessary but not sufficient basis for changing the planning process in the organizations. Unless attitudes shifted to emphasize organizational planning, and in a way aligned with the AMA's approach, it would be difficult to foresee that behavior and ultimately organizational output would change in order to implement the plans set forth during the EPP. To measure the impact of the training on the attitudes of the participants, the research team employed Likert's concept of causal and intervening variables.[23]

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[21] Daniel Katz and Robert Kahn, The Social Psychology of Organizations (New York, 1966), pp. 390-391.

[22] The First Year's Evaluation stressed the central importance of linkages in producing change and the difference between linkages and program content. For change to occur, its preconditions must be transmitted. Training program content is important, but is obviously futile if it is not transmitted to the change targets in a manner which insures, or at least increases the probability, that they will adopt it. Kirkhart and Tanner, op. cit., p. 36.

[23] Rensis Likert, The Human Organization (New York, 1967), pp. 28-29.

The causal variables were organized into a broad category called Organizational Planning. These independent variables can be altered or changed by the organization and its management and require individual knowledge/awareness. In the Y1 report they were divided into sub-sets as follows: (1) Definition of the Mission of the Organization, (2) Mobilization of Organizational Planning, (3) Operational Impact of Training on Organizational Planning, and (4) Credibility of the Planning Process. These sub-sets contained 22 research variables,[24] all related to the stated goals of the AMA for the Organizational Planning Process.

A second broad category was established to reflect Likert's concept of intervening cariables. Registering the internal state and health of the organization, these variables touched upon what the AMA called professional management, i.e., leadership, control, motivation, etc. The category of variables was called Role Relationships and Group Standards by the Y1 evaluation. It was divided into three sub-sets: (1) Leadership, (2) Decision-Making, and (3) the Management Team. These sub-sets contained 17 research variables.[25] These variables were related to the process of managing the organization and were presumed to be affected by the TMB.

Given the design of the AMA program and its emphasis, if organizational change occurred we concluded that measurable changes must have occurred within these broad categories.

In order to provide a valid basis of assessment of the effects of training, the research team added a control group to the organizations to be studied, a comparable state department of education. A Non-Equivalent Control Group research design, to be discussed in detail in Part II of this report, was thus established.

Section 5: Summary of the First Year's Evaluation Findings

The findings reported after the Y1's evaluation concerned only the two state departments of education--referred to here as State E1 and State E2.

The overall conclusion of the research team was that ". . . the effect of training during the first year of evaluation was very limited in experimental State E1 and limited in Experimental State E2.[26]

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[24] Kirkhart and Tanner, *op. cit.*, pp. 39-40.

[25] *Ibid.*

Area 1: Organizational Planning

No significant changes were registered in either organization in terms of the variables set to measure changes in defining the mission of the organization or in mobilizing organizational planning. In fact, seven cases of negative effects were measured. The data suggest that, at the time of measurement, no positive effects regarding the specific training goals had emerged.

There were positive effects experienced in State E2 under the sub-set of variables dealing with the operational impact of organizational planning. The participants' perceptions changed in a positive direction concerning the operability of the organization's overall plan, goals, and policy statements.

The measurement of variables related to the credibility of planning also showed no effect for either state except that State E2 did show a positive effect toward the role of planning in the SED.

Area 2: Role Relationships and Group Standards

An analysis of the variables related to changes in Role Relationships and Group Standards revealed only seven areas of positive effects out of a total of 18 variables measured.

The apparent--though limited--positive effect upon State E2 as compared with State E1 was--in the considered judgment of the Y1 research team--the result of the unintentional development of two different training designs.[27]

This development occurred in implementation of the Educational Planning Process. The EPP was designed to be presented first to each State Superintendent and to his eleven deputies/associates over a period of two weeks. The program was divided into two segments by a four week intersession between the first and second weeks of the EPP. A second EPP was then scheduled to be administered to each Deputy Superintendent in charge of program Services and to eleven of his subordinates. This was the manner of implementing the program in State E1.

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[26] Ibid., p. 136.

[27] Ibid., p. 132.

In State E2 however, it was decided to expand the first EPP by one week because more time was required to complete the training process. There was also a 50% overlap of personnel between the Superintendent's group and that of the Deputy for program service's group. Thus, the first group in State E2 took three weeks of the EPP, returning to Hamilton twice.

As State E1 did not undergo an identical training period, the First Year research team determined that a different training design had been used, and explained the slight difference in terms of positive effects observed in the experimental states.

Section 6: The Present Evaluation Project: Focus and Intent of the Second Year's Evaluation

Assessing Management Training

Judging the effectiveness of managerial training is an important part of the overall evaluation of efforts to improve organizational performance. The part, like the whole, certainly needs improvement. We lack reliable evidence of the extent to which training programs induce positive changes in participants' attitudes and actions.[28] In the present evaluation we have attempted to evaluate the impact of training in both respects.

Area 1:

Concerning attitudes, an evaluation which focused on attitudes observed during the training process may sometimes underestimate and sometimes exaggerate the impact of the program. Some effects appear later. Others persist relatively intact for a lifetime. Residual effects often become dissipated by maturation, experience, and plain forgetfulness. It is misleading to assume, therefore, that attitudes measured by an immediate on-site postevaluation will remain at similar levels for long. To base a judgment of "success" or "failure" on such short-term data is premature.[29]

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[28] John A. Rehfuss, "Executive Development: Executive Seminar Style," Public Administration Review, XXX, 5 (September/October, 1970), p. 556.

[29] See Warren G. Findley, "Measurement and Research in

This common practice was carefully avoided by the Y1 evaluation team. Rather than gather data at the training site, the team assembled data before the trainees left the organization as well as after they returned to the organization and became immersed in their normal organizational roles. One of the objectives of Y2 evaluation was to extend the time frames of the Y1 effort to understand more fully the longer term effects of the AMA's training on participant attitudes.

Area 2:

On the action side of the evaluation ledger, a longitudinal perspective is very important. Specifically, we need to know as much as possible about the effects of time and the environment on the plans produced during AMA training in order to assess more effectively the impact of the program.

> The proposed evaluation is based on the premise that a thorough evaluation of the pilot training project and its implications for the improvement of the management of public institutions requires an understanding of its impact over time on the participants and their educational systems. What happens to the participants and the newly developed planning systems beyond the initial training period? Are they able to make a significant improvement in the management of the educational system? What are the unforeseen problems and/or consequences which only become apparent with time? . . . In short, what is the impact of the AMA's pilot project in the real world?[30]

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the Service of Education," address to Division D, Measurement and Research Methodology, AERA (March, 1970), p. 6ff.

[30] Kent J. Chabotar and Stephen H. Montgomery, "Second Year Evaluation of USOE/AMA Pilot Program: Adapting and Testing Business Management Development Programs for Educational Administrators," April 10, 1971 (mimeo).

In this second area we paid particular attention to plan effectiveness, the extent to which the output[31] of the planning system[32] and the entire educational agency achieves the continuing objectives and specific objectives of the plans developed during and after AMA training. In this context we are specifically interested in what we have defined as two levels of the planning system's output.

Intermediate Output:

The intermediate output of the planning system is defined here as the plans produced in the system after training by the AMA. Selected plans will be evaluated by criteria that express a "good" plan.

Final Output:

We have defined final output as actual measured progress toward the specific and continuing objectives stated in the planning documents.

Each of these seems equally important to us. Well developed plans are an essential precondition of the achievement of strategies and objectives. Plans are merely meaningless paper if they do not lead to the measured attainment of goals and objectives.

Finally, since this evaluation primarily proposes to examine the impact of the organizational environment on the planning approach developed by the AMA, we will describe changes proposed by the participants for their planning system.

Within both areas, attitudes and organizational action, we have studied the impacts of the training on selected variables, not only on the two experimental state education departments (SED's) but also on two participating local education agencies (LEA's) in each state.

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[31] Defined as the plans and planning services made available by the planning system to other elements internal and external to the agency.

[32] Defined as the set of interrelated elements within the educational agency which combine to produce planning output.

Our examination covers a wide range of instruments from interviews to observations, and from open-ended to scaled response questionnaires. Its conclusions will be strengthened by comparing the results in the experimental SED's and LEA's with those in agencies which did not receive the same training at the same time or received none at all. These "comparison" groups have been drawn from two additional SED's and from another LEA in each experimental state. More about this in our next section on methodology.

PART TWO

RESEARCH DESIGN AND METHODOLOGY

INTRODUCTION

Research design is a critical factor in evaluating the effects of any program. Next to determining what we want to study, how we want to study it is the most important question to be answered by the researcher. Design establishes the theoretical framework for the conduct of organizational inquiry by suggesting what observations to make, how and when to make them, and what use will and can be made of the data thus collected. More importantly, it affects the degree to which the data can be unambiguously interpreted, i.e., it attempts to control for multiple explanations of research findings.

In Part II of this report we describe the two-year research design used to evaluate the AMA's training program. We intend to enumerate the various threats to the internal and external validity of the design, and the extent to which our design has controlled them. In addition, we set forth a conceptual linkage between the Y1 and Y2 evaluations. We describe the variables studied by the evaluations, the variables continued from the first year's study, and the new variables which have been added by the present research team. Finally, we account for the instruments used to measure the variables: their purpose and method of construction as well as the manner in which they were administered. The statistical tests applied to the data are also reported.

CHAPTER TWO

RESEARCH DESIGN

Section 1: Problem of the Research Model

A wide range of means to evaluate organizations is available; theoretically, there are as many research designs as there are research variables. Since no constant criteria exist for what constitutes good evaluation, a research design is, in large measure, influenced by the particular setting in which it is used. It cannot stand alone but must address the problem under study. It provides certain kinds of information under certain kinds of conditions.

Perhaps the greatest challenge social scientists face lies in the commonplace presumption that evaluations must always fit the Procrustean bed[1] of the scientific method, specifically, the laboratory approach. The laboratory approach is a research study in which the variance of all or nearly all of the possible independent variables not pertinent to the immediate problem of the investigation is kept to a minimum. This is accomplished by isolating the research in a physical situation apart from the routine of ordinary living and by manipulating one or more independent variables under vigorously specified, operationalized, and controlled conditions.[2]

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[1] Cited in a letter from Robert Palazzi, President of the California Association of Teachers of English, to State Representative John Vasconcellos, Chairman of the Joint Committee on Educational Goals and Evaluation of the California Legislature (16 June 1971):

> Allow us to remind you of the legendary Greek character Procrustes, a robber who placed each of his victims on an iron bed. If the victim was shorter than the bed, Procrustes stretched him, even if it meant breaking his joints, until he fitted it; if the victim was longer than the bed, Procrustes lopped off the overhanging parts of the victim's body. Thus attempts to reduce me to one standard, to one way of thinking, or to one way of acting has since been referred to as 'placing them in a Procrustean bed.'

Laboratory Experiments

Because it does provide relatively complete control over extraneous influences that may affect analysis (through emphasizing a high degree of specificity in the operational definitions of variables, and minimization of error variance through precise measuring instruments and random selection of treatment groups), the laboratory approach has the virtue of being replicable in other contexts. Hence it appeals considerably to the social science researcher interested in making what he considers to be an "objective," "rigorous," and "universally applicable" contribution to his discipline.

Field Experiments

But people in organizations are not inert elements in test tubes. Their actions and attitudes are not amenable to exact definition, external manipulation, transfer to other contexts or, more importantly, isolation from extraneous variables. So the order of the laboratory is exchanged for the disorder of the field study. Field studies are scientific inquiries aimed at discovering the relations and interactions among sociological, psychological, and educational variables in actual social structures.[3] However, much as some might hate to admit it, the field setting often represents reality for the social scientist, and reality is the ultimate test of a program or policy. For of what use is an evaluation program if it can be replicated only in a laboratory?

Thus organizational evaluations, including the present one, are not designed to produce universally valid information or new knowledge but data that is valid and useful within the decision-making context. Evaluations must generate findings and analysis relevant to particular organizations at a particular time, no more and certainly no less. This exploratory type of field study aims at describing what is rather than to predict relations to be found.[4] Field studies have three basic purposes: to decide on significant variables in the research situation, to discover relations among variables, and to suggest guidelines for future research.[5]

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[2] Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart and Winston, Inc., 1964), p. 379.

[3] Ibid., p. 387.

All of this is not to suggest that the laboratory approach is necessarily an inferior research model in social systems, nor do we idealize the field study approach. Neither attitude is easy to adopt for those familiar with either approach, although it might be for people who lack a basic understanding of research methods. Each approach has advantages and liabilities depending on the circumstances being studied, and each must be evaluated accordingly.

Section 2: AMA Provisional Research Design: Promise and Performance[6]

When the research team was first introduced to the AMA training program in 1970, it soon became clear that the only explicit assumption which had been made about our evaluation was that "before and after" data would be gathered from the two state education departments (SED's) which had committed themselves to the program. Conclusions as to its effects on participants and the organizations of which they were a part were to be based on data collected by this method.

> The general concept for evaluation of almost any learning experience is fairly straightforward; its application more complex. Basically our approach is to conduct "before and after" evaluation studies.[7]

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[4] D. Katz, "Field Studies," in L. Festinger and D. Katz, Research Methods in the Behavioral Sciences (New York: Holt, Rinehart and Winston, Inc., 1953), pp. 75-83.

[5] *Ibid.*, p. 75.

[6] Material under this heading was adopted from the Kirkhart and Tanner report, pp. 19-23.

[7] Treadway C. Parker, "Suggestions Concerning Evaluation of the AMA/USOE Training Project" (Hamilton, New York: AMA, 6 Aug. 1970).

In the literature, this approach to evaluation is called a "One Group Pretest Posttest Design" duplicated in two organizations.[8] At first glance this seems to be a satisfactory way to assess the training program. The results of a "before" test could be compared with an "after" test and, if the differences were statistically significant, could indicate a positive or negative effect of the training.

However, from the standpoint of research methodology, this provisional design has serious drawbacks. Data gathered by this method is susceptible to a variety of *multiple* explanations.[9] In other words, we do not know whether or not observed pre/post changes are the result of the training program or some other factor.

Because of the widespread use of this design in educational research and training evaluations, the inherent limitations of the AMA-suggested design, and the effect of its modification on strengthening the subsequent evaluation, it is critical that we clearly explain the consequences of utilizing this "One Group Pretest Posttest Design."

Before beginning the explanation, some definition of the symbols to be used is necessary. In this analysis we shall rely on an adaptation of the work of Campbell and Stanley.[10]

X = experimental or treatment variable

O = observation, data gathering at a specific point in time

R at the end of a row = random assignment of subjects to experimental groups and the random assignment of experimental treatments to experimental groups

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[8] Donald Campbell and Julian Stanley, *Experimental and Quasi-Experimental Designs for Research* (Chicago: Rand McNally & Co., 1966), p. 7.

[9] *Ibid.*, pp. 9-12.

[10] *Ibid.*, p. 6. See also: Kerlinger, *op. cit.*, pp. 292-293; N. Gage (ed.), *Handbook of Research on Teaching* (Skokie, Illinois: Rand McNally, 1963).

Series of dashes (----) between rows = a nonrandom assignment of subjects to experimental groups and/or the nonrandom assignment of experimental treatments to experimental groups.

Any X's or O's in a given row indicate the application of these variables to the same group. Moving from left to right represents forward movement from one point in time to another. Vertical assignments of these symbols indicate that these events, either X or O occurred at the same time to different groups. Thus the provisional design, the "One Group Pretest-Posttest Design"--duplicated in two organizations can be symbolized in the following manner:

	Fall, 1970		Spring, 1971
Experimental Group #1	0	X	0
Experimental Group #2	0	X	0

The above symbolism reflects the fact that data (0) is to be gathered from an organization prior to the introduction of a new program (X) and then gathered after the program is over. The process is repeated in both organizations. There is no control group;[11] this is reflected by the absence of a third row without an (X). Both the observation (0) and programs occur simultaneously in each of the organizations. Lack of a series of dashes between rows or an R at the end indicates that no comparison is to be made between groups.

In this case, the (X) refers to the AMA training program. The 0 indicates a measurement of the impact of (X) on the SED's/LEA's with respect to selected dependent variables previously described. Since the training in all SED's/LEA's was generally limited to the top management of the agency or a particular division, not offered to a random sample of the total administrative population, an (R) is inappropriate.

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[11] In experimentation the control group is a standardizing device. The control group constitutes a base line standard against which to measure the experimentally treated group. The key idea is that the experimental group, which is chosen from the same universe as the control group, would show the same results as the control group had it not been treated experimentally. See: Julian Simon, Basic Research Methods in Social Science (New York: Random House, 1969), p. 325.

This last characteristic deserves further elaboration. Because the experimental groups were not randomly selected, the possibility that the results of the study can be generalized to other groups (or the same group at other times) is reduced.[12] Random selection[13] of a population sample has the advantage that it is possible to make statements about the characteristics of the total population, or in this case of other education agencies.

This is not intended as criticism of the choice process used in this evaluation, but this lack of randomness characterizes most field studies of the effects of training in an ongoing organizational setting. Participants select themselves into the experimental groups on the basis of characteristics extraneous to the research problem; examples of these factors are hierarchical rank, work group, useful influence, prior experience, etc.

In the study of the AMA's program, the research team was given an experimental group and asked to evaluate the impact of the training on them and on their organizations.

The self-selection process[14] is, however, one of many factors which can adversely affect the strength of a research design.

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[12] See Sir Ronald Fisher, Design of Experiments (Edinburgh: Oliver & Boyd, 1951).

[13] The principle of randomization means that every member of a population has an equal chance of being selected. Members with certain distinguishing characteristics--male and female, Republican and Democrat, extrovert and introvert, high and low intelligence, and so on and on--will, if selected, probably be counterbalanced in the long run by the selection of other members with the "opposite" quantity or quality of characteristics. We might say that this is a practical principle that indicates what happens. It is simply a statement of what usually happens when random procedures are used. Kerlinger, op. cit., p. 57.

[14] W. Richard Scott, "Field Methods in the Study of Organizations," in James G. March (ed.), Handbook of Organizations (Chicago: Rand McNally, 1965), pp. 261-303. See also: Egon G. Guba, "Common Sense About Experimental Design and Educational Research," paper read at a faculty seminar, School of Education, New York University, 25 Feb. 1963.

Section 3: Threats to Validity[15]

Validity is the overall concept used to refer to the potential accuracy of an evaluation. In their work on quasi-experimental design, Campbell and Stanley[16] have identified fifteen factors which, if not brought under control by the research design, may complicate efforts to measure training effects. They are called "threats to validity" and fall into two general categories; internal and external:

Internal Threats to Validity: extraneous variables which may have a significant impact on the experimental group yet go unmeasured by research instruments, causing us to attribute greater effect to the training than is warranted. Internal validity, then, answers the question: To what extent can we clearly assess whether the training program really made a significant difference in the actions and attitudes of SED/LEA personnel who participated in it? Clarity of assessment is conditioned by:

1. History: events, other than the experimental treatment, occurring between pre and post test and thus providing alternate explanations of events.

2. Maturation: processes within the trainees or their agencies producing changes as a function of the passage of time *per se*, such as growth, fatigue, secular trends, etc.

3. Instability: unreliability of measures, fluctuations in sampling persons or components, autonomous instability of repeated or equivalent measures. (This is the only threat to which statistical tests of significance are relevant.)

4. Testing: the effect of taking a test upon the scores of a second testing. The effect of publication of a social indicator upon subsequent reading of that indicator.

5. Instrumentation: in which changes in the calibration of a measuring instrument or changes in the

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[15] Much of this material was taken directly or adopted from the Kirkhart and Tanner report, pp. 19-23.

[16] Campbell and Stanley, *op. cit.*, pp. 5-6.

observers or scores used may produce changes in the obtained measures.

6. Regression Artifacts: pseudo-shifts occurring when persons or treatment units have been selected upon the basis of their extreme scores.

7. Selection: biases resulting from differential recruitment of comparison groups, producing different mean levels on the measure of effects.

8. Experimental mortality: the differential loss of respondents from comparison groups.

9. Selection-maturation interaction: selection biases resulting in differential rates of "maturation" or autonomous change.

External Threats to Validity: factors which impede our ability to generalize the information gained from one experimental group to other experimental groups.[17] Here we are concerned with problems like: "To which other SED's/LEA's can the information gained by this evaluation be generalized?" "All SED's/LEA's?" "Only those in the same region?" "Merely to the same group at a different time?" "Or can it be generalized at all?" The major consequence of not controlling for these threats is to dramatically reduce or even make impossible the extension of findings to other contexts. These threats are:

1. Interaction effects of testing: the effect of a pretest in increasing or decreasing a respondent's sensitivity or responsiveness to the experimental variable, thus making the results obtained for the pretested population unrepresentative of the effects of the experimental variable for the unpretested total population from which respondents were drawn.

2. Interaction of selection and experimental treatment: unrepresentative responsiveness of the experimental population.

3. Reactive effects of experimental arrangements: artificiality, conditions that render the experimental

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[17] Glen H. Bracht and Gene V. Glass, "The External Validity of Experiments in Education and the Social Sciences," (Research Report #3, Laboratory of Educational Research, University of Colorado, Oct., 1967).

setting atypical of conditions of regular application of the treatment: "Hawthorne Effects."

4. Multiple-treatment interference: where multiple treatments are jointly applied, producing effects atypical of the separate application of the treatments.

5. Irrelevant responsiveness of measures: all measures are complex, and all include irrelevant components that may produce apparent effects.

6. Irrelevant replicability of the treatments: treatments (experiments) are complex and replications of them may fail to include those components actually responsible for the effects.

Since we are evaluating the effects of training on a nonrandom sample in a quasi-experimental field situation, it will not be possible to guarantee that our findings have generalizability or external validity. Therefore we must restrict ourselves to the nine threats to internal validity detailed above and describe what kinds of strategies are relevant to controlling for or reducing the impact of these threats to our research data.

Here we are largely on our own as we are aware of no available document which systematically deals with this problem. On the other hand, there is a series of strategies implied in the work of Campbell and Stanley which we shall attempt to make explicit.

According to our analysis, the nine threats to internal validity can be grouped into three areas: (1) factors affected by the presence of control groups, (2) factors affected by the manner in which the measurement process is handled, and (3) a factor which cuts across both of the former areas.

Strategies for Minimizing Threats to Validity[18]

Conditions Related to Presence of Control Groups

Threats	Reduced by:
1. History	Addition of one or more control or non-treated groups, preferably selected on a random basis and/or utilization of data collected over an

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[18] Kirkhart and Tanner, op. cit., pp. 23-27.

Threats	Reduced by:
	extended period of time. If only the latter strategy is used, it is critical that the measurement process by which the data were generated remains the same. (Cf. analysis of threat #5 below.)
2. Maturation	Addition of one or more control groups, preferably selected on a random basis.
4. Testing	Addition of at least one control group which is not pretested, assuming both the experimental and control group are selected randomly or addition of at least two control groups--one is pre and post tested, the second is post tested only. (Assuming random selection processes, differences between the first and second control group is related to testing.)
6. Regression Artifacts	Avoidance of the use of groups which are extreme, either high or low, in relation to the general population as determined by some measurement device.
7. Selection and 9. Selection Maturation Interaction	Random selection of experimental group(s) plus examination of recruitment, selection and turnover figures in the case of groups which have existed over time prior to the experiment.

* *

Conditions Related to the Measurement Process

Threats	Reduced by:
3. Instability	(Assuming the presence of at least one control group.) Statistical analysis and probability theory plus careful design of measurement factors.
5. Instrumentation	(Assuming the presence of at least one control group.) Not modifying measurement instrument during the evaluation and through analysis of the comparability of "comparable" or "equivalent" measurement methods, if these are to be used.

* *

General Condition

Threat	Reduced by:
8. Experimental Mortality	Random selection process if group(s) is (are) to be temporary plus (in the case of nontemporary groups) careful pre and post analysis of mortality rates in the population studied.

Each of these techniques is a way in which the threats that these factors pose to internal validity may be minimized. Failure to apply these reduction strategies on a particular threat are grounds for discounting, or at least opening to serious question, a singular interpretation of the research findings. For example, if an autocratic superintendent of schools was replaced by one who was more participative during the course of the evaluation after the training program but before the final tests, any credit that the training could be given for improving organizational climate would have to be shared with the extraneous personnel change.

A key concern, therefore, is to ask what controls to minimize those threats are present in the AMA provisional research design. Unfortunately, the simple fact is that the design contained virtually none. Without being able to compare apparent changes in groups which participated in the program with a control group which did not, no real defense may be raised against the charge that our findings did not reflect AMA training at all but rather the effects of one or more threats listed above.

In addition, the lack of any provision for random selection of the groups raises the issue of self-selection. Did participants really represent the SED/LEA in question? Even under optimal conditions, this last problem is almost impossible to control in evaluating an already existing program.

For these reasons the provisional research design was determined to be less than satisfactory if the purposes for which the evaluation was commissioned were to be served. If the early design had been utilized, there would have been at least six, and perhaps nine, equally plausible, irrefutable explanations of the research data. This is indicated in the table below.

History	Maturation	Testing	Regression Artifacts	Selection	Selection-Maturation Interaction	Instability	Instrumentation	Experimental Mortality
-	-	-	-	-	-	?	?	?

Note: Dash (-) = NO CONTROL

Section 4: First Year's Evaluation (Y1): Final Research Design[19]

Because of these concerns, a control group was added to the Y1 evaluation. This third group was selected on the basis of interviews with top administrators in each of the experimental states. Each person was asked to name an SED which was most like his own. From these inquiries, three states were nominated and one was selected. The top administrator of the proposed state was contacted and he agreed to permit his agency to participate in the Y1 evaluation as the control group. A part of his rationale for accepting this role was the promise that his group would have access to the research findings, and the possibility that present cooperation might give them access to similar training if the program expanded.

The "Non-Equivalent Control Group Design"[20] which grew out of these circumstances is described below:[21]

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                          Fall, 1970      Spring, 1971

                                0      X       0
Experimental SED #1 -------------------------------------
                                0              0

                                0      X       0
Experimental SED #2 -------------------------------------
                                0              0
```

Because the designs for both the first and second years' evaluation are similar, a discussion of the first year's design has been combined with that of the second year's design, and follows that section of the report.

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[19] Kirkhart and Tanner, *op. cit.*, p. 26.

[20] Campbell and Stanley, *op. cit.*, pp. 47-50.

[21] The bottom row in each case represents the *same* control group.

Section 5: Second Year's Evaluation (Y2): Promise and Performance

Factors which were taken into account when designing Y2 centered around the use of control groups:

1. Addition of Second Control SED: As they had hoped when agreeing to participating in Y1, the control state did become involved in AMA training . . . which began in the middle of Y2. If Y2 was to retain the important contribution that the control state mechanism made to the interpretation of research findings, it was necessary to add a second SED which was not exposed to AMA training for comparison to the two . . . and now three . . . states who were. You may remember from a previous section that the original control state was chosen after interviews with top administrators in the two experimental states . . . and that it had had the highest consensual rating of the three nominated by them. To obtain the second control state for Y2, the research team approached the state with the next highest rating. Fortunately, they also agreed to participate as a control state. Their expressed reasons for signing on were similar to those of the first control state: access to research findings and the possibility of receiving training if the program expanded a second time.

The Y2 evaluation on the SED level thus becomes tri-level: two experimental states whose AMA training ended over a year ago, one experimental/control state which has just completed its training program after being the control state during Y1, and a control state with no training experience. These multivariate comparisons will make the Y2 research design even stronger than the one used in Y1.

2. Addition of Two Control LEA's: Y2 has made provision for comparing data gathered from the experimental LEA's with an appropriate control LEA. Without such a basis for comparison, the validity of these results would have been as uncertain as the validity of SED data would have been without their control group(s). Our LEA evaluation under these circumstances would have been unable to refute the argument that the apparent effects had nothing to do with training but were the results of history, maturation, testing, instrumentation, or instability. There would have been no untreated group to provide baseline data for comparative assessment of the kinds and degrees of change alleged to have emerged from AMA training.

Realizing this threat to validity, the Y2 research team added one control LEA to the two experimental LEA's in each state, or two control LEA's in total. The recruitment process was a slight variation of that used on the state level. We asked the chief planning officer in each experimental SED to suggest an LEA in his state which was most similar to the two experimental LEA's. The proposed LEA controls were contacted and each agreed to participate.

Section 6: Macro Y1 & Y2 Research Designs: SED & LEA Levels

Aside from the extension of the time frames into a second year, the addition of these control groups is the major change made by Y2 to the basic Y1 design. The symbols used to illustrate this design are as follows:

SYMBOLS USED

ESED #1 = experimental state education department #1
ESED #2 = experimental state education department #2
CSED #1 = control state education department #1 (also used in Y1)
CSED #2 = control state education department #2 (added for Y2)

ELEA #1 = experimental local education agency #1 (same state as ESED #1)
ELEA #2 = experimental local education agency #2 (same state as ESED #1)
CLEA #1 = control location education agency #1 (same state as ESED #1)

ELEA #3 = experimental local education agency #3 (same state as ESED #2)
ELEA #4 = experimental local education agency #4 (same state as ESED #2)
CLEA #2 = control local education agency #2 (same state as ESED #2)

			Y1			Y2	
I.	SED LEVEL	Fall, 1970 T1		Spring, 1971 T2	Fall, 1971 T3		Spring, 1972 T4
[A]	ESED #1	0	X	0	0		0
	CSED #1	0		0	0	X	0
[B]	ESED #1	0	X	0	0		0
	CSED #2				0		0

	ESED #2	0	X	0	0		0
[C]	----------						
	CSED #1	0		0	0	X	0
	ESED #2	0	X	0	0		0
[D]	----------						
	CSED #2				0		0

II. LEA LEVEL

	ELEA #1	0	X	0	0		0
[E]	----------						
	CLEA #1				0		0
	ELEA #2	0	X	0	0		0
[F]	----------						
	CLEA #1				0		0
	ELEA #3	0	X	0	0		0
[G]	----------						
	CLEA #2				0		0
	ELEA #4	0	X	0	0		0
[H]	----------						
	CLEA #2				0		0

Explanation

0 = data gathered at the time indicated (T1) thru (T4)

X = AMA training program

Series of dashes (----) between rows = a nonrandom assignment of subjects to experimental groups

[A] thru [H] = paired comparisons of experimental and control groups

I. SED Level

[A] = Data was gathered from ESED #1 (at T1) prior to the introduction of AMA training (X) and then gathered three times after training was completed (T2-T4). While data was gathered from CSED #1 simultaneously, it entered AMA training subsequent to T3.

[B] = Data was gathered from ESED #1 (at T1) prior to the introduction of AMA training (X) and then gathered three times after training was completed (T2-T4). CSED #2 was added as a control group for Y2 due to CSED #1 entering AMA training and underwent data collection only twice (T3 & T4).

[C] = Data was gathered from ESED #2 (at T1) prior to the introduction of AMA training (X) and then gathered three times after training was completed (T2-T4). While data was gathered from CSED #1 simultaneously, it entered AMA training subsequent to T3.

[D] = Data was gathered from ESED #2 (at T1) prior to the introduction of AMA training (X) and then gathered three times after training was completed (T2-T4). CSED #2 was added as a control group for Y2 due to CSED #1 entering AMA training and underwent data collection only twice (T3 & T4).

II. LEA Level

[E] = Data was gathered from ELEA #1 (at T1) prior to the introduction of AMA training (X) and then gathered three times after training was completed (T2-T4). For Y2, CLEA #1 was added as the control group for ELEA's #1 & 2 and underwent data collection only twice (T3 & T4).

[F] = Data was gathered from ELEA #2 (at T1) prior to the introduction of AMA training (X) and then gathered three times after training was completed (T2-T4). For Y2 CLEA #1 was added as the control group for ELEA's #1 & #2 and underwent data collection only twice (T3 & T4).

[G] = Data was collected from ELEA #3 (at T1) prior to the introduction of AMA training (X) and then gathered three times after training was completed (T2-T4). For Y2, CLEA #2 was added as the control group for ELEA's #3 & #4 and underwent data collection only twice (T3 & T4).

[H] = Data was gathered from ELEA #4 (at T1) prior to the introduction of AMA training (X) and then gathered three times after training was completed (T2-T4). For Y2 CLEA #2 was added as the control group for ELEA's #3 & #4 and underwent data collection only twice (T3 & T4).

Section 7: Effectiveness of the Overall Research Design

With the exception of the lack of random selection, this design approximates a true experimental model that minimizes threats to internal validity. But the lack of random selection cannot be dismissed as having no effect on our findings. While additional controls have been added, this lack of random selection still makes a difference between the Y1/Y2 design and a true experiment in three areas: (1) selection-maturation interaction, (2) regression artifacts, and (3) experimental mortality.

1. Selection-Maturation Interaction differences are largely confined to the recurring problem of matched groups vs. randomly selected groups. We have already conceded the impossibility of random selection due the nature of the training program itself.

As far as equivalence (matching) is concerned, Y2 contains two partial controls. First it should be noted that the addition of even an unmatched or nonequivalent group greatly reduces this threat to validity as found in the "One Group Pretest/Posttest Design" proposed in the AMA's provisional design. The impact that each training program has on the experimental groups is thereby made "equivalent" in relation to the control group(s) which did not receive training. This division allows us to avoid a number of questionable assumptions about the extent to which the experimental groups were similar and reduces the problem of defending the comparability between the experimental and control groups. Second, the addition of a second control state in Y2 is a further refinement toward establishing some limited evidence of presampling matching.

Of course more could have been done. The equivalence of groups can be determined by using the means and standard deviations of the pretests as well as by checking their distributions. For this purpose, t tests and F tests are acceptable. If all items prove out via these methods, one can proceed with instrument administration with at least some assurance that there is clear evidence of the extent the groups were or were not matched before the experiment began.[22]

But we must emphasize that these techniques or any other of the frequently used means of making adjustments (analysis of covariance, using difference scores) are not as effective as randomization for controlling the selection-maturation interrelation threat to internal validity. As

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[22] Kerlinger, op. cit., p. 43.

Frederic Lord has written: ". . . there simply is no logical or statistical procedure that can be counted on to make proper allowance for uncontrolled preexisting differences in groups."[23]

2. The factor of regression artifacts has been brought under control by the greater longitudinal perspective afforded by the addition of another control group. The original regression problem was the difficulty of separating real from pseudo changes given the nonrandom selection of the experimental groups. However, since we are now able to plot out 4 sets of results on a 2 year time frame instead of 2 sets of results on a 1 year time frame, we have an improved sense of the true direction and levels of change brought about by AMA training. The 1-2 year comparison with 2 control groups further lessens the effects of regression artifacts.

3. Finally, it is possible to effect control over the variable of Mortality through an examination of the extent to which differential mortality occurred between the experimental and control groups when the posttest data was gathered.

To summarize, the control effects of the macro design used for Y1 and Y2 on the SED and LEA levels are as follows:

History	Maturation	Testing	Regression Artifacts	Selection	Selection-Maturation Interaction	Instability	Instrumentation	Experimental Mortality
+	+	+	+	+	?	+	+	+

Note: Plus (+) = control over the threat to validity

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[23] Frederic M. Lord, "A Paradox in the Interpretation of Group Comparisons," Psychological Bulletin (1967), p. 305.

Section 8: Further Strengthening Program Assessment: Improvements Made by Y2

1. *Pretest of Instruments*: There are several methods to provide evidence that instruments are *reliable*, i.e., that the information they produce will tend to remain stable over time, all other things being equal. If we test the same group again and again with the same or similar instruments will we obtain the same or similar results? As such, reliability is an index of random variance in the results of a study and tries to minimize its impact.

While reliability is not the most important characteristic of "good" analysis, it is still essential. High reliability does not guarantee accurate results and logical conclusions, but without it we can never be sure if our apparently logical conclusions are based on accurate results. Its absence leaves the evaluator open to the charge that his results were biased by instruments too insensitive to measure low level changes or too crude to be consistent over time.

The reliability of Y1 was established by one method. The questionnaire was based on another instrument of proven reliability which had already been used in similar circumstances.

Another method was added for Y2. Using essentially the same Y1 questionnaire (with a few revisions), a *pretest*[24] was run on the Y2 questionnaire. The pretest of instruments is another way to certify test reliability. Mistakes at the analysis stage can be remedied at almost no cost prior to being put into print or administered.[25] But just deciding to pretest is simple; deciding how to pretest is not so simple.[26] The Phi Delta Kappa National

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[24] Our instruments consisted of scaled response *questionnaires* and semi-directed *interviews*. Pretesting refers more specifically to the questionnaires.

[25] Lee J. Cronbach, *Essentials of Psychological Testing* (New York: Harper & Row, 1949).

[26] Insofar as clarity of instructions was concerned, *interview reliability* was pretested on a small sample. It was determined that questions could be easily understood and related to the respondents. In addition, care was taken to administer them under standard, well controlled, and similar conditions to lessen error variance due to situational ambiguity.

Study Committee on Evaluation points out that there are many different routes that an evaluator can take:

> Determination of reliability may be accomplished by such techniques as split-half correlation (yielding a measure of internal consistency), comparable forms correlation (yielding a coefficient of equivalence), correlation of the same for at different times (yielding a coefficient of stability), or correlation of comparable forms at different times (yielding a coefficient of equivalence and stability).[27]

On the basis of our inquiries, we decided to run a two-way analysis of variance as well as a Spearman's R_s on the data. Our pretest group consisted of a group of educational administrators in the Office of Residential Life at Syracuse University. It was composed of central staff members as well as residence hall directors and resident advisors in the field (N=34). Each was given the same questionnaire on two consecutive Mondays and asked to return it in a sealed envelope on the same day. Questionnaires were coded to facilitate paired comparisons. The variance on week-to-week responses per respondent were within acceptable limits. The Spearman's R_s showed high correlations with the lowest being .41 but most being in the .70+ range. With this result, it was decided that questionnaire reliability was satisfactory.

This Y2 pretest was an *ex post facto* check on those items from the Y1 questionnaire continued on the Y2 questionnaire. It also provided evidence of the reliability of those new items designed specifically for the Y2 questionnaire. We could, therefore, proceed with the instrument as written.

2. *Analysis of Environmental Impact*: An important part of the evaluation of any training program is an assessment of the effects of return to the work environment on the lessons learned and the plans produced by the trainees.[28] To accomplish this the analysis should not take place during or immediately before/after training. It should

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[27] Phi Delta Kappa National Study Committee on Evaluation, *Educational Evaluation and Decision Making* (Bloomington, Indiana: Phi Delta Kappa, Inc., 1971), p. 28.

[28] Daniel Katz and Robert Kahn, *The Social Psychology of Organizations* (New York: John Wiley, 1966), pp. 390-391.

await reassertion of the organizational environment in which the trainees will have an opportunity to act out their training.

> . . . in this milieu, many of the determinants of organizational behavior, which are absent in off-site training situations, have full sway. The role sets, group and organizational norms, constraints which grow out of the absence or presence of technology, and the influence of the organizational environment are the force field against which training efforts are ultimately applied. If the training effort is to have the effect of changing patterns of behavior in the organization, this set of factors must, in some ways, change.[29]

The effect of environmental determinants is always basic and prior to the others. A plan or program must be assessed, at least in part, according to its ability to withstand pressures in the environment. A course of action which may seem eminently reasonable in the classroom might not seem so great to the folks back home or to the trainees themselves once they return to the realities of administrative life.

But since considerable overlap already existed between the training and evaluation cycles during Y1, the extent to which such a study was possible was limited. As Y2 began several months after the training (at least in the experimental states), and will end after another year has passed, it had a good opportunity to assess the extended effects of AMA training on the respective organizational environments.

3. Longitudinal Perspective: Another spinoff of the proximity of the training and evaluation cycles was the limitation placed on examining training impacts over time, especially after the training was completed. Such a long view is known as the "time series," "historical," or as in

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[29] Larry Kirkhart and W. Lynn Tanner, "Evaluation for Center for Planning and Development of the American Management Association," Report submitted to the American Management Association and the United States Office of Education, Syracuse University (Oct. 1971), p. 30.

this study, the "longitudinal" method. Its main advantage is that it helps us to get some idea of the ability of "changed" attitudes and actions to remain relatively constant over the long haul. Changes measured too close to the time of training may quickly dissipate or may increase after a few days, months, or years. An absence of change in one variable at one point in time may take on a positive or negative direction at another. With a greater longitudinal perspective we can strengthen our confidence that training was indeed adequate preparation for organizational life.

But a longitudinal perspective is not an absolute good--extending the time frame does not always bring corresponding increases in confidence in research results. Evaluating too long after the conclusion also increases the impact of the internal threats to validity outlined previously on the effects of training. It also decreases the relevance of the original data to data gathered much later. After all, information relating to schools in 1945 is apt to be misleading today due to external factors, changes in data reporting and collection procedures, etc. Or to cite Bressler and Tumin's example:

> If . . . we wished to measure the capacity of a social studies curriculum to modify racial attitudes in a class that entered in 1964 and graduated in 1968, how could we protect the inquiry from the "contamination" of intrusive events in the era of Lyndon Johnson, Stokley Carmichael, and the death of Martin Luther King?[30]

Finally, the likelihood that goals or procedures developed during training will remain stable over more than a few years is remote given the fact that "education for change" and continuous emergence of new programs is taken as a natural, desirable condition of the system. This complicates the evaluation process considerably.

Therefore our decision criterion was to take as long a view as possible without going so far that our conclusions would be severely threatened by the inevitable effects of the passage of time. Nor did we want to lose continuity with the Y1 research team or personnel from the experimental groups.

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[30] Marvin Bressler and Melvin Tumin, Evaluation of the Effectiveness of Educational Systems, Vol. I (Princeton, N.J.: Princeton University Press, 1969), p. B9.

It was decided that, given these considerations, an evaluation covering an entire year after training was completed would be optimal. A longitudinal perspective was gained using the baseline data of Y1. The two years together can be valuable to those undertaking future evaluations of this or similar programs.

4. Inclusion of LEA Data: The Y1 research design included an analysis of effects of AMA training on the four experimental local education agencies which participated. Data was collected from them in a manner similar to that used in the SED's. Y1 promised that these results would be available when the doctoral dissertation of one of the members of the research team was completed.[31]

Using the basic Y1 design and instrumentation, Y2 has continued analysis on this level. The Y2 evaluation report will contain data gathered during two years and appropriate conclusions drawn from them.

5. Addition of Organizational Output Data: The basic premise of Y1 was that its proper focus was the measurement of attitudinal change as a precondition for organizational changes. Unless participant attitudes are changed by training, its effects are likely to be temporary.

In addition, since the ending dates for the evaluation and training were almost coterminous, an assessment of the structural and behavioral impacts of the AMA program would have been premature. No organization is able to implement the results of a training program in a few weeks.

The attitudinal measures used in Y1 have been only slightly revised for Y2. Whatever revisions which have been made have centered on the added dimension of actual organizational output as a result of training. These concerns of Y2 include analyzing the plans produced subsequent to AMA training, progress toward educational objectives recommended therein, and other elements of the planning process. It is through such an examination that the impact of the program on participant and organizational attitude and actions can best be assessed.

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[31] Kirkhart and Tanner, op. cit., p. 40n.

Strategies for Strengthening Overall Evaluation

Target Areas	Improvement made by:
1. Pretest of Instruments	Y2 questionnaire was pretested on a sample drawn from the Syracuse University Office of Residential Life and analyzed using two-way analysis of variance and Spearman's R_s. In so far as clarity was concerned, the interview questions were pretested on a small sample of persons known to the research team.
2. Analysis of Environmental Impact	Analysis of impacts of training one year after the training has ended and after participants have returned to their education agencies.
3. Longitudinal Perspective	Given the necessity for keeping the research team intact, reducing the mortality rate of the training group, and minimizing the effects of external variables, the time frames for evaluation were extended by one year by Y2.
4. Inclusion of LEA Data	Evaluation report contains data and conclusions for all participating LEA's in the AMA training program for both evaluation years (Y1 & Y2).
5. Organizational Output Data	While the attitudinal measurements used in Y1 have been only slightly revised for Y2, additional instruments were added. This includes an analysis of the plans produced, progress toward action plan, continuing and specific objectives, money made available for use by educational planners, etc. (cf. Appendix).

CHAPTER THREE

RESEARCH METHODOLOGY

A fundamental problem of evaluation is to define what is to be evaluated and then how. This task has been made somewhat easier in the Y2 evaluation because it is related to the Y1 evaluation. As is discussed above, the overall evaluation is a two-year longitudinal study.

Section 1: Research Methodology - Y1

The research methodology employed in Y1 was developed after a careful analysis of the training design employed by the AMA as well as of the way it was implemented. As Chapter One reported, the first year's research team developed the conceptual linkages of (1) individual awareness/knowledge, and (2) role relations and group standards through which change--if it was to occur when participants returned to the organizational setting--must be transmitted. These linkages were operationalized by grouping around them the variables in the study. The two categories corresponded to Likert's concepts of causal and intervening variables.[1] The Y2 evaluation has utilized the same two general categories, which are presented in Chapters Four and Five.

Data were collected by means of three techniques: structured questionnaires, semi-structured interviews, and observations of training--these instruments sought to measure the effect of training on attitudes.

The first year's evaluation did not try to measure organizational output regarding planning. As the Y1 team pointed out, while a set of documents (action plans) was produced for each SED and LEA during the training process, the documents ". . . represented intentions, not necessarily processes and policies which have had the opportunity to be implemented and affect organizational output.[2]

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[1] Rensis Likert, The Human Organization (New York, 1967), pp. 28-29.

[2] Larry Kirkhart and W. Lynn Tanner, "Evaluation for Center for Planning and Development of the American Management Association" (Syracuse, New York: Syracuse University, October, 1971), p. 40.

Section 2: Research Methodology - Y2

The present evaluation's primary focus has been to measure the impact of the AMA's training program, over time as well as in the context of the organizational environment: how the program affected attitudes, actions, and organizational output in the experimental organizations. To this end we have maintained and expanded the two categories originally developed by the Y1 research team and have added a third concerning the end-result output of these organizations. In each category we have used the data developed through the evaluative techniques discussed below.

As in the Y1 evaluation, we have conceptualized the research variables of this project in terms of Likert's causal and intervening variables. We have also, of course, added his third category, end-result variables. Likert defines these categories as follows:

> The "causal variables are independent variables which determine the course of developments within an organization and the results achieved by the organization. These causal variables include only those independent variables which can be altered or changed by the organization and its management.[3]
>
> The "intervening" variables reflect the internal state and health of the organization, e.g., the loyalties, attitudes, motivations, performance goals, and perceptions of all members and their collective capacity for effective interaction, communication, and decision making.[4]
>
> The "end-result" variables are the dependent variables which reflect the achievements of the organization. . . .[5]

Grouping the research variables into these broad categories establishes a linkage which enables us to assess more accurately the impact of the training on the organizations in terms of attitudes, actions, and results, as well as to examine the interrelation among these variables.

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[3] Likert, op. cit., p. 40.

[4] Ibid.

[5] Ibid.

Section 3: Measurement of the Impact of Training

Three techniques were employed to gather data during the second year evaluation: scaled response questionnaires (SRQ), open-ended interviews, and an analysis of organizational documents. All three techniques were applied to the two original experimental state educational agencies and the data was collected on site. The SRQ's and open-ended interviews were also used in Control SED #1 while only the SRQ's were completed in Control SED #2. All the local educational agencies completed the SRQ's.

Section 4: The Use of Scaled-Response Questionnaires

Questionnaires were utilized in this research because they are easy to administer and are pre-coded. They also produce large amounts of data while requiring a relatively short period of intervention in the organization's processes. The primary disadvantage of structured questions is that they sacrifice much of the color and intensity of the respondent's answer.[6] Questionnaires also may induce a compliance process on the respondent's part--people say what they think they should say. This is termed the problem of reactive measurement and is a significant issue in social science research.[7]

The problem of interpretation of the intensity of the respondent's opinions is partially overcome by using a rating scale which allows the respondent to indicate the direction and intensity of his feelings. The questionnaire employed in the present research used a seven-point scale discussed below. To control and check for the problem of reactive measurement, we consciously attempted to allow major areas of overlap in the questionnaire and open-ended interviews.

Section 5: The Design of the Questionnaire[8]

Because this is a longitudinal study, the questionnaire design we used was that of the Y1 instrument. As we stressed above, this choice was partly a recognition of the critical importance of using the same instruments and procedures to insure the reliability and relatedness of the data drawn from both years of the study.

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[6] Charles H. Backstrom and Gerald D. Hursh, Survey Research (Minneapolis, Minn., 1963), p. 75.

[7] Kirkhart and Tanner, op. cit., p. 38.

[8] The entire questionnaire as administered in the State Education Departments and the Local Education Agencies is located in Appendix D of this report.

The Y1 questionnaire was designed around two broad categories related to organizational planning and the managerial environment. After a factor analysis of these items, the Y2 research team selected 28 items which were highly correlated around these categories. In addition, to meet the expanded needs of the Y2 effort the research team added 29 new items.

The questionnaire items clustered around three categories; the first is related to goals of the AMA program which involved organizational planning. The second set of items reflect AMA's process objectives: what they wished to induce in the management environment of the experimental organizations. The third category seeks to isolate end-result variables.

Organizational Planning Process

The following items have been continued from the Y1 questionnaire.

1. The kinds of things I am doing will make a long-term contribution to education.
2. The goals of this organization are articulated.
3. Our goals are realistic and attainable with our best efforts.
4. My organization's policy statements are clear.
5. My organization's performance standards are understood.
6. Good ways are used to let me know how I can improve my performance.
7. I have good ways for knowing how good our results are.
8. My manager makes it clear that he is committed to the success of our projects.
9. My manager has expressed the belief that the AMA's training program has been helpful.
10. As I see it, planning is an integral part of running the state's schools.

The following items were added in the Y2 questionnaire:

11. The top priority objectives of state education are clear to me.
12. I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.
13. As I see it, the operational priorities of the objectives developed during AMA training are clear.

14. I understand what results must be produced to achieve the stated objectives of this organization.
15. The planning unit has been helpful to me.
16. My organization has reliable ways for knowing how well it is attaining its objectives.
17. I think that the objectives developed during AMA training are clearly stated with respect to results expected.
18. My manager understands planning theory and is able to put it into practice.
19. I believe my organization gives me adequate training to do my work.
20. I feel good about my manager's ability to plan.
21. My manager provides me with adequate support to perform my job.
22. As I see it, persons in this organization put a lot of effort into planning.
23. My capability to plan effectively will positively affect my future career in this organization.
24. The activities relating to planning are having an effect on the policy of this organization.
25. As I see it, my organization is moving in the right direction.
26. My organization's plan is operable.

The Development of the Organizational Management Environment

The following items have been continued from the Y1 questionnaire:

1. Based on information I have received from my boss, I know if I am measuring up in my job.
2. My manager encourages and supports innovation.
3. Higher management's reactions to the problems that reach them are fair.
4. My manager knows and understands the problems I face.
5. My manager recognizes when a problem is developing and does something constructive about it.
6. My manager shows confidence and trust in me.
7. The people I work with participate appropriately in setting the goals of our work.
8. I am appropriately involved in decisions affecting my work.
9. My group works hard to achieve its goals.
10. My work group understands what we are trying to achieve.
11. I feel my group works well together.
12. I really feel my immediate work group is getting things done.
13. When differences arise in my work group, we have good ways for settling them ourselves.

The following item was added in the Y2 questionnaire:

14. I can influence the goals, methods, and activities of my organization.

Progress Toward Goal Achievement

The following item was added in the Y2 questionnaire:

1. As I see it, my organization has made progress in attaining its objectives.

A seven point scale was the basis for responses to the items in the questionnaire.

1	2	3	4	5	6	7
not at all			fairly often		very often	

As in the first year's instrument, an effort was made to expand the time frame of the research data. Two sets of responses were called for on each item - a perspective on the organization when the questionnaire was being administered and an additional perspective. In the case of the Fall 1971 administration of the questionnaire the added perspective was Fall 1970, a time just prior to the original training. In the case of the Spring 1972 administration, the additional perspective requested was Fall 1972.

This procedure produced a time-series which had the potential of describing the change in respondents' attitudes over two years.

The data base of the Y2 questionnaire thus is as follows:

QUESTIONNAIRE DATA BASE

	Fall 1970		Fall 1971	Spring 1972	Fall 1972
Agencies Trained	0	X	0	0	0
Control Agencies	0		0	0	0
	Projected Back		Actual Test Admin.		Projected Forward

For this report, the most useful data concerns the points in time when the test was actually administered. Therefore we have based our analysis of Y2 on this data.

Section 6: Administration of the Questionnaire

The scaled response questionnaire was the common instrument used in all ten agencies we surveyed, and it was administered in two ways.

The procedure followed in Y1 was followed exactly in the two experimental states. The questionnaire was given to the top 24 people in the state agency after each was interviewed. At that time the purpose of the questionnaires was explained and the respondent was asked to give two identical questionnaires to the two subordinates to whom he had given the questionnaire during the first year. These subordinates were originally identified as individuals with whom the respondent had good communication and who were not involved in the training. This procedure produced a test population of 72 in each state. As in the first year's evaluation, the assumption was made that "good communication" meant that the individual thus identified would be to some degree sensitive to the influence of the training. This assumption seems even more valid for the present study, for the test organizations have since developed and conducted in-service training programs based on what they learned from the AMA.

In the control states, the questionnaire was mailed to a pre-arranged contact in each agency who then distributed the questionnaire. In control state 1 the population was identified as being the same as the one tested in year one. In the control state added for the second year's evaluation the state superintendent was asked to identify the 24 persons who were felt to be the most important in terms of the operation of the agency. This was the same procedure used by the AMA in selecting persons to be trained and in testing control state 1. Again, the total potential population which completed the questionnaire in each control state was seventy-two.

The procedure we followed in the local educational agencies was identical. However, because only 12 top administrators were trained in each of the pilot LEA's the total population in each LEA was thirty-six--twelve administrators and twenty-four subordinates.

The questionnaires were administered circumspectly, so as to insure anonymity. Instructions on the cover page of the questionnaire asked respondents to return the questionnaire to the contact person in a sealed envelope, and a plain brown envelope was distributed with each questionnaire for this purpose.

Section 7: Statistical Analysis of the Questionnaire Data

The major problem in statistical analysis of the questionnaire data was to select a statistic that was both comprehensive and powerful. Another important problem was to determine simultaneously to what extent the compared groups were similar or dissimilar and to what extent the training was producing change as measured by the questionnaire items.

The statistical test we chose to analyze this data was the Two-Way Analysis of Variance, the same statistic used in the Y1 evaluation. Conventionally, this statistic can be designed in two ways. One design enables a comparison of row and column variance plus a test for interaction between rows and columns.[9] We chose the second design here on the grounds that it was important to know whether the interaction of training effects and differences between States were significantly influencing analysis of the row and column data. In essence, this design checks the selection-maturation problem which was questionably controlled by the original research design (Cf. Chapter Two).

This particular statistic (1) tests for the existence of significant differences between the States and LEA's which are being compared (this test is made on the basis of both the mean scores and the variances around each of these means); (2) tests, on the same grounds--means and variance around the means--for the effects of training on the basis of before and after scores.

The first of these tests, in effect, holds time constant, and answers the question, "Are the groups statistically different from each other?" This is represented by row variance and is summarized by the value of the F statistic. The other analysis, column variance, examines for differences over time and provides an answer to the question, "Did the training program have a statistically significant effect?" Throughout, the .05 level of significance is the minimum basis for the decision that training did indeed produce a difference.[10]

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[9] Herbert Blalock, Social Statistics (New York: McGraw-Hill, 1960), pp. 253-266. Cf. especially p. 264.

[10] In case the reader is not familiar with this terminology, the .05 level of significance means that if we say a difference exists between groups we would expect to be incorrect in making this inference only five times out of a hundred. By the phrase greater significance we mean the .01 or .001 level which means we would expect to be incorrect in saying a difference existed between the groups only once out of one hundred times or once out of one

Section 8: Summary: Statistics Used to Analyze Questionnaire Material

In the context of this study, analysis of column variance is thus an analysis of the effects of training. The analysis of column variance will tell us if change occurred between the scores obtained in two different periods.

Row variance means an analysis of differences between the states, independent of changes that occurred over time within the states. This statistic tells us if the states differ from each other in the degree of emphasis given a particular item when change in emphasis given to the item is held constant and our only concern is the amount of emphasis in each state for a specified time period.

With two exceptions, we evoke only one research design in the analysis of the questionnaire data. This is the Non-equivalent Control Group Design discussed in Chapter Two of this report. This design applies to all the questionnaire items continued from the Y1 questionnaire, for which we have data at four times, including a pre-training test. The meaning of this data is straightforward and can be confidently interpreted.

The first exception involves four items which were not asked in the control states because they queried attitudes related to AMA training and were applicable only to managers in the experimental states. In these instances we are faced with a weak research design because of the absence of a control group.[11] When this problem is encountered in the text we remind the reader of it.

The second exception involves items which were added to the Y2 questionnaire and thus allow only a T3-T4 comparison. No pre-training data exists to be used with this data. We must therefore be much more cautious in interpreting this material.[12] However, because a second control group was added in T3 and because we can draw rather direct inferences from the T1-T4 comparisons and the organizational documents to support the results of this data, we have made judgments concerning training effects based on this data. Again, the reader will be reminded when such qualified data appears in the text.

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thousand times respectively. The greater the significance the greater the probability of a correct decision.

[11] Cf. Chapter Two of this report for a complete discussion of the problems related to this type of research design.

[12] Cf. Chapter Two - Research Methodology.

Section 9: The Use of Interviews

Unlike questionnaires, interviews require a tremendous investment of time by researchers and respondents. There are also difficult and time consuming tasks which must be completed to utilize the data thus collected. These include developing across-the-board content categories to analyze data which does not fall neatly into categories, since interviewees are asked to respond spontaneously to whatever questions are posed. For purposes of coding, a structural or forced-choice interview mode is usually suggested.

Disadvantages are outweighed in this evaluation situation, however, by advantages. Backstrom and Hursh point out that the free-response question is especially useful:

> (1) where the researcher has limited knowledge as to the kind of answers a particular question is likely to provoke, (2) where he anticipates a great range of responses, (3) where he is interested in what the respondent will volunteer on a subject before specific prompting, or (4) where he wants to go a little deeper into respondents' motivations.[13]

This free response interview technique has comparative advantages over the imposition of controls. The interviewer can provide the overall framework for the interview by asking a set number of basic questions. But any follow-up questions are based on the responses of the interviewee. As such, the interview techniques adopted for Y1 and Y2 allow us to be more confident of the findings and conclusions generated by the interview data.

As the first year's report made clear, the semi-structured interview

> enables the respondent to describe circumstances and events with a minimal amount of definitional structure provided by the researcher. Theoretically, material produced through this method will be more "reality oriented"; more as the interviewee sees and defines things. There

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[13] Backstrom and Hursh, op. cit., p. 73.

> is also reason to believe that data gathered through this technique will be more conservative, i.e., less likely to show training effects and that when effects are produced they are more likely to be of meaning and value to the respondent and, hence, the organization . . . the semi-structured interview process is more likely to reveal internalized beliefs held by the respondent.[14]

Section 10: Administration of the Interviews

The procedure followed in conducting the interviews duplicated that of the first year's research. The top twenty-four administrators chosen by the State Superintendent to participate in the training were interviewed in the two experimental states. The top twelve administrators were interviewed in Control State 1. As in the first year, the analysis of the interviews is restricted to the top twelve administrators in each state educational agency.

With one exception, interviews were conducted exactly as they had been during the Y1 research. Interviews took place on-site in the organizations themselves, in settings which insured maximum privacy. A slightly different format was followed with the Control State in Y2. Because of scheduling difficulties and the fact that the Control State was entering training in the Fall of 1971, the research team conducted the first set of interviews at the AMA training site in Hamilton, New York, at night and in the privacy of respondents' rooms. The second set of interviews were conducted on-site in each organization.

Each respondent in all interviews was asked twelve questions in the Fall and fifteen questions in the Spring. They were assured of their anonymity and urged to be as open and candid as possible.

The questions continued from the Y1 evaluation were:

1. What do you think you got out of the training experience with AMA?
2. How are major decisions made in the State Department?
3. What is the role of planning in running the state's schools?
4. How do you feel about the direction your organization is moving?

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[14] Kirkhart and Tanner, op. cit., pp. 37-38.

5. What are the roadblocks to change in this organization?

The questions asked in the Fall and Spring of Y2 were:

6. Do you feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education?
7. Were there any people or groups whom you feel should have participated in the development of objectives for the state department of education who did not participate?
8. Is planning influencing the decisionmaking process within the state department of education?
9. How has the planning unit helped you to plan?
10. Toward what action plan objectives has measurable progress been made by your division?
11. Toward what action plan objectives has measurable progress been made by the state department as a whole?
12. What changes in the planning process or in the action plan itself do you feel are necessary at this time?

The questions asked in the Spring of Y2 were:

13. What specific methods do you use to determine if the continuing and specific objectives of your division are being met?
14. Have performance standards been established for your subordinates based on the objectives in your division's plan?
15. Do you have regular performance reviews with your subordinates?

The interviewers worked from a set of cards which contained the questions and insured that the order of items was always the same. After the initial response, non-directive probes were used to draw out the respondent and insure that he had responded to the question as fully as he could or wished to do. Feedback techniques were used, i.e., "I hear you saying that..." or "the major points you are making are...." This technique served to elicit additional information and also to correct and clarify impressions the respondent was making.[15]

Section 11: Analysis of the Semi-Structured Interview Data

Tape-recorded material from the interviews produced approximately twelve pages of double-spaced typescript per respondent. The material was subjected to content analysis and coded,[16] a procedure that involved organizing the material in such a way that answers were provided to specific questions being researched. A random sample of the interviews were reviewed and a set of categories was developed for each interview item.[17] A seven point scale was used to quantify the responses.

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[15] Before the interview process was begun both interviewers went through a training session to improve and practice their ability to provide non-directive feedback. This training was provided by the faculty advisor to this project.

We have used twelve of the interview questions in the data base of this study. The questions and the content categories we use in this report are listed below.

Interview Questions and Content Analysis Categories

A. What do you think you got out of the training experience with AMA?

1. Definition of the institution's mission
2. Modify previously established objectives
3. Determine priorities
4. Identify and analyze alternative courses of action
5. Define standards of performance for key administrators
6. Specify task completion dates and action assignments
7. Assign responsibilities to subordinate units
8. Design a methodology by which future performance may be evaluated in relation to the performances specified in the plan
9. Produce and implement a long-range strategic plan
10. Establish credibility of planning
11. Promote cooperative team work

B. Do you feel that the objectives developed as a result of AMA training reflect the most serious and pressing needs of state education?

11. (Question acts as a content domain - no sub-classification necessary)

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[16] Cf. Robert North, Content Analysis (Evanston: Northwestern Univ. Press, 1963); Ole R. Holsti, Content Analysis for the Social Sciences and Humanities (Reading, Mass.: Addison-Wesley, 1969); and Bernard Berelson, Content Analysis in Communication Research (Glencoe, Ill.: Free Press, 1952).

[17] The complete coding document is found in Appendix of this report.

C. How are major decisions made in the State Department?

12. Involvement in decisionmaking
13. Quality (effectiveness of decisionmaking)

D. What is the role of planning in running the state's schools?

14. Role of planning (how integral is it?)
15. Need for planning (how much is needed?)
16. Emergence of planning (when it became an issue?)

E. Is planning influencing the decisionmaking process within the State Department of Education?

17. (Question acts as a content domain - no subclassification necessary)

F. How has the planning unit helped you to plan?

18. Awareness of need to evaluate our plans
19. Available to answer planning questions
20. Reviewing and refining plans
21. Provides leadership in the implementation of planning
22. Provides in-service training in planning

G. Toward what action plan objectives has measurable progress been made by your division?

23. Number of objectives toward which progress has been made
24. Level of progress toward those objectives

H. How do you feel about the direction your organization is moving?

25. (Question acts as a content domain - no subclassification necessary)

I. What are the roadblocks to change in this organization?

26. Adequate Resources
27. Control System expressed through decisionmaking process
28. Sense of SED mission
29. Amount of cooperative teamwork present

J. Have performance standards been established for your subordinates based on the objectives in your division plan?

30. Extent of Use
31. Need for Performance Standards

K. Do you have regular performance reviews with your subordinates?

32. Existence of Performance Reviews

L. What specific methods do you use to determine if the continuing and specific objectives of your division are being met?

33. Performance Reviews
34. Questionnaires
35. Task Completion Inventories
36. Unobtrusive Measures

Section 12: Procedures Used in Content Coding

The validity of content coding depends heavily on a common understanding among the coders. To deal with this problem in the Y1 evaluation, the field researcher for Y1 and the two members of the Y2 research team worked jointly to develop the content categories and to code the interviews. Given this previous experience, the Y2 research team coded the interviews they completed in the second year of research.

In order to insure that this material would be treated as objectively as possible, we made every effort to develop a mutual understanding of the material and the way it was to be coded. Several trial runs were undertaken in which each coder independently coded the same interview and then compared his product to assure a high degree of similarity in each coder's procedure. Once similarity was attained, the entire body of interviews was coded.

The coders read the entire interview document prior to coding. This was done to avoid the Assumption that the interviewee's verbal response always proceeded in an exactly logical, sequential manner. Thus we could incorporate remarks that were appropriate to an earlier section of the interview but were articulated only later. We intended to give the respondent every opportunity to provide recordable material for the research; since this meant, in many instances. maximum comment on matters directly related to the goals of the AMA project, this also means that, if anything, a positive bias exists in the scores we recorded.

Section 13: Statistical Analysis of the Content Material

Because the number of subjects in this analysis is small, it was necessary to select statistical tests expressly designed for small samples--non-parametric statistics. Since the semi-structured interview is designed to enable the respondent to project his or her own definition of the situation onto the research question, the number of respondents to each of the research categories defined by the coding instrument fluctuates considerably. This fluctuation provides one point of analysis; the scaling technique which recorded intensity of response provided a second point of analysis. In order to test for differences in intensity of reaction, the Kruskal-Wallis One-Way analysis of variance was applied to the scale scores. This test, capable of handling extremely small numbers of respondents, still provides a meaningful analysis of the probability of differences between groups.[18]

The procedure utilized in this test is to pool the scores of individuals from both groups and then rank this total set of data from high to low. Each individual score is translated into an ordered ranking in which the highest individual score in the pool receives the lowest numerical score. In other words, the individual whose response was highest would receive the ranking of one, the individual with the second highest response would receive a two, etc., until all individuals have been ranked. Then this aggregate data which is composed of responses from both groups is redistributed back to individual group rankings. Using a comparison of the strength of these rankings in each group, a decision can be made, based on probability, about whether the groups are or are not different.

The Kruskal-Wallis test thus enables us to decide which group placed the greatest emphasis on the research category. This test is not affected by the number of respondents in each group; it simply reveals (given any number of respondents) whether the degree of emphasis differs between the groups. The test statistic which provides this information is the H statistic. Only when this value reaches the .05 level of significance will we say that a difference existed between the subject groups.

A second test was included to examine the important question of what kinds of fluctuations occurred in the number of respondents and whether or not these fluctuations were significant between groups. The semi-structured interview, designed to enable the respondent to say what was important to him at that particular time, makes this question very significant. If the training program had any impact on attitudes, a larger number of people would possibly be aware of specific issues after the training than were aware of the same issues before training.

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[18] Cf., Sidney Siegel, Non-Parametric Statistics for the Behavioral Sciences (New York: McGraw-Hill, 1956), pp. 184-93.

The question we wanted to explore was, "Did the training have the effect of changing the population of people who were aware of specific issues?" Since we could answer the question of changing emphasis by the test previously described, we wanted to determine if, independent of intensity of reaction, aggregate awareness changed. The Binomial Test of Proportions provides this information.[19] It provides a useful analysis so long as the population is less than twelve; in those cases where all of the persons interviewed provided information relevant to the research category, the test has no meaning; awareness of the issue already existed for all people.

The symbol used in the text to represent the Binomial Test will be a P; only when its value is such that the .05 level (or a greater difference) is obtained will we say that a difference existed between the groups studied.

Section 14: Summary: Statistics Used to Analyze the Interview Content Data

The text relies heavily on the Kruskal-Wallis statistic; in a number of instances the test of proportions also will be used. The first of these tells us whether a significant change appears in the degree of emphasis given to a particular research category when one group is compared to another. The second test tells us whether a significant increase exists in the degree of aggregate awareness, independent of intensity expressed, which can be attributed to the effect of training or which existed between the groups.

Finally, it should be pointed out that interpretation of these statistics is somewhat ambiguous in some instances. Because interview questions which were directly related to expected or actual experience with the AMA training program were only relevant to the two Experimental States, we faced the problem of a weak research design whenever these questions were encountered elsewhere. As was discussed above, in such instances we grappled with a research design which lacked a Control group.

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[19] Blalock, *op. cit.*, pp. 176-77.

Whenever data of this type is encountered, its interpretation should be regarded as more tenuous than is the case when a Control group comparison is included. The reader will be reminded of this, too, when such data appears.

Section 15: The Use of Organizational Documents

A great variety of organizational documents have been searched and reviewed to offer background to the evaluation and the evaluators. Most evaluators agree that "mere collection of data does not constitute evaluation."[20] This information has served as qualitative support for our conclusions when they did not lend themselves to total quantification or when their accuracy could not be guaranteed by the research design itself. As we have indicated earlier, because of nonrandom selection of the experimental population and the lack of conclusive proof of pre-sampling equivalence, judgment must lead the way into areas unmapped by statistical analysis.

Organizational documents offer another back-up indicator to the interviews and questionnaires which will lend greater credence to our findings. Frequently, a particular evaluation of the effect of a program based on one or two indicators will be contradicted or amended if another indicator is taken into account; different indicators give different perspectives on the same program.

> We suggest that, as a general rule, any measurement of a social science concept that relies on a single indicator should be viewed as dubious. While simply adding more indicators is of little value if they measure the same dimension, drawing on two or more indicators of different dimensions provides at least partial insurance against fractional coverage and its dysfunctions.[21]

Searches of organizational documents can be more quickly done than administration and analysis of tests.

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[20] Egon G. Guba, "The Failure of Educational Evaluation," Educational Technology (May, 1969).

[21] Amitai Etzioni and Edward W. Leham, "Some Dangers in 'Valid' Social Measurement," The Annals, 373 (September, 1967), p. 4.

One of the many drawbacks to quantitative analysis is that its results come too long after the conclusion of the evaluation to be useful in making methodological changes. With Y2, we have been able to use organizational documents to focus other instruments on crucial areas. The time lag between data collection and judgment about the effectiveness of instruments to measure what should be measured has been abbreviated slightly.

Finally, as Campbell has written, organizational documents enable prior records of the experimental group to serve as the control or the basis for inferring what would have happened without the intervention of the training program.[22] For example, if an LEA had not published a comprehensive plan or cost benefit analysis for several years before the AMA program, and then in the year subsequent produced even a few such documents, such a change may reasonably be connected to the training program. Or if an SED established a planning unit immediately after the training program where none had existed previously, the AMA could claim at least partial credit.

Section 16: Analysis of Organizational Documents

Y2 has relied on organizational documents as indirect, and occasionally direct, evidence of the impact of AMA training. Such papers include: (1) action plans developed by SED's and LEA's during AMA training, (2) plans produced by SED's/LEA's subsequent to training either to amend existing action plans or to elaborate on them, (3) attempts to implement AMA-suggested preconditions for effective planning such as in-service training, agency-wide job descriptions, etc., (4) revisions in the organizational chart (such as the establishment of a planning unit) as indirect evidence of pre/post training's formal emphasis on planning, (5) previous consulting reports on the strengths and weaknesses of the experimental SED/LEA's, and (6) miscellaneous evidence of planning output, e.g., use of indices of goal attainment, input of client groups as shown by samples and feedback from LEA officials, etc.

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[22] Donald T. Campbell, "Considering the Case Against Experimental Evaluations of Social Innovation," Administrative Science Quarterly, 15:1, pp. 110-113. See also: "Reforms as Experiments," American Psychologist, 24, pp. 409-429 by the same author.

PART III

FINDINGS AND ANALYSIS

INTRODUCTION

Our central concern in this evaluation is to measure the impact of the AMA's training program over time and in the context of the organizational environment of attitudes and actions inside the experimental organizations. The essential questions we attempt to answer here are "To what extent--if any--did the AMA program change the attitudes and actions of the people in the experimental organizations? What effect on organizational output did any such change exert?" To be considered effective the training program must have eventually improved the output of the organizations trained.

Our analysis of attitudinal change is based on the assumption that people in organizations act on the basis of a complex network of beliefs, values, norms, and definitions of reality that are peculiar to the organization. Based on the stated premises of the AMA (discussed below) we assume that the training program attempted to change some of these attitudes.

We do not assume that a direct relationship necessarily obtains between expressed beliefs and actual behavior or that beliefs and values held by persons in an organization are always consistent with their overt behavior.

> Attitudinal change is a necessary condition to changing organizational behavior but not a necessary and sufficient condition. Social reality in an organization is considerably more complex and is in all cases conditioned by perceived possibilities of action "in-the-situation." These possibilities are . . . shaped by the environment (political, economic, social) of the organization, relationships between and among departments, group norms or standards, action possibilities created by technology, and the orientation of individual's toward organizational processes.[1]

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[1] Larry Kirkhart and W. Lynn Tanner, "Evaluation for Center for Planning and Development of the American Management Association" (Syracuse, New York: Syracuse University, October, 1971), p. 40.

Our analysis of impact related to action is based on the program's objectives set forth by the AMA. We are specifically interested in the effects of time and organizational environment on the plans developed by the experimental organizations during AMA training. To what extent have the continuing and specific objectives of the plans produced during and subsequent to training been achieved? We are interested too in the plans produced and in measured progress toward the achievement of the stated objectives.

Before discussing the conceptual linkage used to evaluate the impact of the AMA's program, it will be useful to review the basic premises and training approach employed by the AMA in its management development programs for educational administrators. What does AMA perceive to be management problems in educational agencies, and what do they propose to do about them?[2]

The AMA Approach: Basic Premises

The AMA recognizes that executives generally lack sufficient training in managerial principles and practices. This shortcoming is evinced by many kinds of organizational enterprises, not only businesses. Persons promoted into high administrative positions on the basis of past performance often cannot cope with the increased pressures of those positions. According to the AMA, the reasons for executive failure often include the fact that "seldom is there any attempt to ensure that appropriate training or experience in management is part of one's qualifications."[3]

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[2] The information for this section was gathered from four basic sources: 1) American Management Association, "Feasibility and Pilot Programs Proposal: Adapting and Testing Business Management Development Programs for Educational Administrators" (June 22, 1970)(Mimeo.); 2) Kirkhart and Tanner, op. cit.; 3) Raymond E. Klawuhn and Alexander J. Basso, "Adapting and Testing Business Management Development Programs for Educational Administrators," Final Report, Vol. 1 (January, 1972); and 4) Informal discussions with personnel in the American Management Association and the experimental educational agencies.

[3] Klawuhn and Basso, op. cit., p. 1.

An ongoing concern of the AMA has been to improve managerial effectiveness in business and industry. After an extensive examination, the AMA concluded that many of the problems they had long been handling in their corporate clients were also obvious in educational agencies. Because the problems were similar the solutions could also be similar. In the words of the AMA:[4]

> 1. The management problems facing educational agencies and institutions are analogous to those facing business and industrial enterprises.
>
> 2. The management skills and techniques practiced by business and industrial enterprises could be modified and effectively applied by managers of educational agencies.
>
> 3. The management and organizational development programs of the AMA could be modified and adapted to the particular requirements of educational managers, thus enhancing the management of educational agencies and institutions.

The AMA Perspective on Management Problems in Education

In their final AMA report on the pilot project being evaluated here, five basic management problems that affect the performance of educational agencies are summarized:[5]

> 1. Decisionmaking processes: Most educational agencies lack a coherent, explicit plan of action. Without the guidelines such a plan would provide, the decisionmaking process within the agencies is often nonsystematized and vague. Administrators never really know what the decisionmaking process of their respective agency *is*, let alone what it *should be*.
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> 2. Organizational Structure: The comparative responsibilities of the various

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[4] *Ibid*., p. 2.

[5] AMA, *op*. *cit*., pp. 3-4; Klawuhn and Basso, *op*. *cit*., pp. 3-4.

levels within an educational system are frequently left undefined. The powers and duties of school boards, superintendents, principals, and staff specialists result from long-standing tradition and legal provisions rather than any conscious attempt at organization. Job descriptions and performance standards for key administrators either do not exist or are unclear. As a result, they are unsure of what is expected of them and responsibility becomes diffused. The agency then becomes unable to deal with its current problems or future changes.

3. Converting educational-theory into practice: Recent advances in educational theory which could have long-term benefit for educational agencies are untranslated into general practice.

4. Integrated Planning: Various agencies and levels within the same educational system work in isolation. Consequently their plans become unrelated and system planning becomes fractionalized. Each part "does its own thing" so the whole becomes divided and lacks coherent direction. In addition, means and ends become confused: strategies for achieving objectives are accepted as objectives in themselves and short-term, perhaps temporary, gains are mistaken for satisfactory end results.

5. Educational Objectives: Realistic and measurable objectives do not appear as integral parts of educational decision-making. They tend to be too general or too specific, are not relevant to the real needs of the organization, and progress toward them cannot be easily measured, if at all.

The AMA Approach to Management Development

In order to solve these management problems in education the AMA attempts to improve organizational effectiveness through the development of individual managers.

Emphasizing "leadership by example"[6] the AMA concentrates on top management and on people directly responsible to them. Unless top management is attuned to the principles of good management, openly supporting and practicing them, there is little likelihood that overall organizational effectiveness will increase. The AMA's general rule of thumb, therefore, is to start at the top of the hierarchy, or as close to the top as possible, for that is where the power to change an organization usually lies.

Within this top group, a team planning process is attempted. Organizations involved in the training actually develop a plan for their organization. It is argued that by experiencing this process, the participants are forced to deal with their management problems and develop new approaches to them. If, for example, decisionmaking is clearly overcentralized and individuals within the organization do not thoroughly understand their responsibilities, solutions to these problems are developed. In this case, the team may decide that decisions should be made by people who are responsible for them and set an objective to develop job descriptions and performance standards that clarify responsibilities.

The word team is crucial to an understanding of the AMA approach to organizational management and planning. AMA believes that "the crucial factor is the degree to which the training/learning experience represents a change in accepted or traditional practices and procedures."[7] If the modified behavior does not radically depart from past modes of administrative operations and interpersonal relations, then its adoption should proceed smoothly. But in those cases where modified behavior is radically different, forces within the organization will resist and may oppose its adoption because the behavior threatens their accepted ways. Within such a hostile environment, individuals may find it difficult to retain their modified behavior patterns and may return to other behaviors more in line with the organization.

Accordingly, the AMA seeks to change the behaviors of entire teams of managers. By involving the entire executive staffs of the experimental educational agencies, AMA theorizes, people receive suitable reinforcement from their colleagues for maintaining and actually diffusing their new approach to management and planning in the face of normal organizational resistance. Since AMA teams constitute the top management of the organization, this mutual reinforcement is expected to sustain program effects as they percolate to lower levels.[8]

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[7] Ibid., p. 12.

[8] Cf. Chapter One of this report for a thorough discussion of the AMA's actual training design and format.

The AMA's Pilot Project

The two major objectives of the original proposal were:[9]

1. To determine the feasibility of developing and applying particular learning methods and modified contents of AMA's management development-programs, which would be considered effective for training various levels of educational administrators.

2. To introduce and experimentally conduct these educational programs for representative multi-state, multi-level groups of educational administrators over a period of one year.

With the concurrence of USOE, the AMA listed fourteen criteria on which the training program should be evaluated:

1. an agreed—upon definition of the agency's mission,
2. established continuing objectives and planning procedures for long-range achievement of the institution's mission,
3. identified resources and constraints,
4. differentiated between where the institution _is_ going and where it _wants_ to go,
5. modified previously established objectives,
6. identified and analyzed alternative courses of action,
7. determined priorities,
8. made strategic action assignments,
9. defined standards of performance for key administrators,
10. specified task completion dates,
11. designed supplementary planning efforts,
12. assigned responsibilities to subordinate units,
13. designed a methodology by which future performance may be evaluated in relation to the performance specified in the plan,
14. produced and are implementing a long-range strategic plan.

The AMA perspective insists that these are not abstract principles but concrete realities requiring concrete decisions. As such, their development during AMA training substantially contributes to improving the decisionmaking process. AMA believes that the only way to learn is by doing. The AMA concludes:

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[9] AMA, _op. cit._, p. 4; Klawuhn and Basso, _op. cit._, p. 5.

> . . . that the criteria were based on the expectation that educational managers would acquire decisionmaking skills and successfully apply them to their own education agencies. A second, although not so obvious conclusion, is that the training aspects of the Team Planning Process . . . were definitely of secondary importance. That they were necessary precedent is certainly to the point, especially from the theoretical viewpoint; but these would be reinforced by actual application: by making decisions, by creating a strategic plan; by identifying resources, etc.[10]

The final criterion by which to assess program effectiveness was actual progress toward the objectives enumerated in the plans produced. Unless the changed behaviors and new plans had some impact on pupils and other clients for whom they were intended, the program could not really be called a success.

> Inasmuch as effectiveness is a function of the results achieved for the resources consumed, any final judgment as to the adaptability of business management principles to education must be reserved until a comparison of past results with future results as expressed in each institution's plan is possible.[11]

Linking Program with Organizational Impact

As in the Y1 evaluation we have conceptualized the research variables used in this project in terms of Likert's causal, intervening, and end-result variables.[12] Each of the next three chapters will treat each of these categories in turn.

The causal variables are discussed in Chapter Four The Organizational Planning Process. Causal variables are defined here as "independent variables which determine the course of developments within an organization and the results achieved by the organization."[13] In the context of this evaluation we have defined the AMA's basic training goals listed above as being causal variables; the extent to which they have been achieved will highly determine the effectiveness of the training program and its consequent impact on organizational output. The establishment of these variables is seen as essential to the development of a viable planning process within the experimental organizations.

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[10] Ibid.

[11] Ibid., p. ii.

[12] Rensis Likert, The Human Organization (New York, 1967), pp. 26, 29.

The intervening variables are displayed in Chapter Five, The Development of the Organizational Management Environment. These describe the health of an organization--in this case the internal environment of the organizations hale against the professional management criteria of the AMA. As has been discussed above, the AMA has specific process objectives for leadership style, decisionmaking process, and management team relations in any organization. It is our purpose to evaluate the extent to which these organizational processes changed as a result of the training program.

Chapter Six is concerned with the evaluation of the effects of the training program on the output of the organization. We have defined as end-result variables the plans produced by the organizations and measured progress toward the achievement of the objectives specified. Both are considered equally important. An observable impact on the output of the organizations trained is seen as the essential precondition of a positive evaluation of the AMA's pilot project.

Reporting Format

In the following three chapters we examine as thoroughly as possible the attitudes and actions taken by the organizational participants concerning the various research variables.

The analysis of organizational documents appears first. Most of this material is discussed in Chapters Four and Six and relates specifically to the plans which have or have not been produced and implemented in the experimental organizations. We also discuss other elements of the AMA training goals, for example, performance standards and evaluation methodologies developed.

Following the analysis of organizational documents, data concerning our attitudinal research variables is offered. This data is organized so that the interview content analysis appears first. These data emerge from interviews with the top twelve administrators in each experimental state and in the original control-state. Similar interviews were not conducted in the Local Educational Agencies, so this analysis speaks only of SED's.

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[13] Ibid.

The questionnaire data for the larger populations in the states is presented next. As the reader will recall from Chapter Three, questionnaires were completed by the twenty-four people who completed training and by two subordinates of each of these persons. This created a total population of about 72 in each state. The same procedure was followed in the Control States.

Next we present data collected in the Local Educational Agencies. Because of the wider range of data available, our primary focus rests on the State Educational Departments. In each chapter SED data will be presented first, followed by a separate section on the LEA's.

In examining the impact on the SED's and LEA's we have integrated wherever possible the data developed over the two year life of this evaluation. Each chapter is followed by a summary in which specific, data-based conclusions are made. A final conclusion and judgment regarding the overall effectiveness of the American Management Association's pilot project appears in Chapter Seven.

CHAPTER FOUR

THE ORGANIZATIONAL PLANNING PROCESS

In this chapter we examine thirteen of the criteria put forward by the AMA as the basis of training program evaluation.[1] These "causal" variables are independent variables which should influence, at least theoretically, the course of future developments within the participating educational agencies and the results they achieved.[2] Achievement of these criteria alone will not guarantee success to the program; much depends on the internal climate of the organization (intervening variables) and an assessment of educational gains made by these agencies due to training (end-result variables). We include here evidence of the AMA's fourteenth training goal, the implementation of a long-range strategic plan. But satisfactory progress on the causal variables is a first step toward, and a necessary precondition of, progress on the other variables.

Specifically, we evaluate the criterion-referenced actions taken during and after AMA training, as well as participant attitudes toward them. Our examination is divided into four parts.

The first area (Organizational Planning Process - Area I) deals with the 7 criteria most fully developed by the experimental units during the training program. The second area (Organizational Planning Process - Area II) considers those criteria which were not addressed until after the training program. Although the AMA initially implied that all criteria would be met to some degree at the training site, some were reserved for attention only after training ended. In both parts, we assess what was accomplished, offer data displays based on participant attitudes, and analyze why certain things happened and others did not.

In the third area (LEA Data), data gathered from participating local education agencies (LEA's) is introduced. Here we study the attitudes expressed by school district personnel toward selected criteria. A two-year data display similar to that used for the SED's is presented. Finally, we offer some conclusions about the attitudinal changes produced by AMA training in the LEA's in relation to the criteria.

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[1] American Management Association, "Feasibility and Pilot Programs Proposal: Adapting and Testing Business Management Development Programs for Educational Administrators" (June 22, 1970), pp. 4-5 (mimeograph).

[2] Rensis Likert, The Human Organization (New York:

The fourth area (Overall Conclusions and Summary) assesses and summarizes the preceding three sections. It is an overall outline of the extent to which we believe the causal variables/criteria have been met by AMA training in the experimental educational agencies. The concluding section is based not only on whether or not each variable/criterion was accomplished but also on how participants view them. As we have urged in previous chapters, actions and attitudes are mutually dependent; without changes in both, prospects of long-term organizational change are diminished.

AREA I: THE CAUSAL VARIABLES 1 THROUGH 7; SED'S

Here we examine the extent to which the first seven goals of the AMA were accomplished and what the participants thought of them. The following discussion is divided into two parts. The first part broadly discusses expected results, actual results, and significant issues raised by these items. The second part displays and discusses the attitudinal data.

Section 1: Action

A. Expected Results

We will enumerate the first seven AMA criteria, and provide definitions where appropriate. The definitions paraphrase those used by AMA in the planning documents.

1. Agreed upon a definition of the institution's mission;

   Mission: The broadest, most comprehensive statement that can be made about central or continuing purpose. The chief function or responsibility of an organization which justifies continuing support of the organization and provides initial direction for its management or administration. The purpose of the mission statement is to provide clear focus for the resources of the organization.

McGraw-Hill Book Company, 1967), pp. 26, 29.

2. Established continuing objectives and planning procedures for long range achievement of the institution's mission;

   Continuing Objectives: Statements of general direction or intent. A continuing objective is broad, timeless and unconcerned with particular achievement within a specified period.

3. Identified resources and constraints;

   Resources: An estimate of the personnel, money, material, and information available to the institution to do what it wants to do.

   Constraints: Internal or external forces which influence, impede or prevent the institution from doing what it wants to do.

4. Differentiated between where the institution is going and where it wants to go;

5. Modified previously established objectives;

   Specific Objectives: Are quantifiable and/or observable achievements which can be measured within a given time and under specified conditions. Specific objectives whould reflect the critical factors required for the attainment of a continuing objective. The achievement of a specific objective, therefore, contributes toward the attainment of the overall goal. Objectives should be clearly differentiated from the means (strategies) employed to attain them.

6. Identified and analyzed alternative courses of action;

   Strategies: Are the programmatic means used to attain a specific objective?

7. Determined priorities;

   Priorities: Judgment of relative importance of objectives when considered in relation to significant criteria. Objectives with "high" priority are emphasized more than, and usually implemented prior to, those with "low" priority.

B. Actual Results

Taking the above seven causal variables/criteria, we examine how much they have been accomplished, at least on paper. We drew no conclusions here as to their relevance to actual organizational behavior. In the next section we offer supplementary evidence based on participant attitudes. Our present purpose is merely to determine the extent to which the State Education Departments performed the above exercises as stipulated in the original project proposal. The following chart summarizes our findings, and all these items are explained in the following text.

SUMMARY OF ACTION FINDINGS

SED LEVEL

AMA CRITERIA 1-7

FALL, 1970 to SPRING, 1972

No.	Criteria	Amount of Progress		
		Minimum	Moderate	Maximum
1.	Agreed upon a definition of the institution's mission			E1, E2
2.	Established continuing objectives and planning procedures for long-range achievement of the institution's mission			E1, E2
3.	Identified resources and constraints		E1, E2	
4.	Differentiated between where the institution is going and where it wants to go		E1, E2	
5.	Modified previously established objectives		E1, E2	
6.	Identified and analyzed alternative courses of action		E1, E2	
7.	Determined priorities		E1	E2

Both experimental states had similar experiences and similar results while at Hamilton. Each underwent training and prepared materials covering all seven areas. There were some differences in the form of presentation as well as in content but these are not significant. By and large, comparable degrees of progress were made by the two groups at the training site.

A *mission* statement and set of *continuing objectives* were developed by ESED #1 and #2.[3] The planning documents devoted considerable space to an external and internal

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[3] These can be found in the planning documents produced by both states. See: Raymond E. Klawuhn and Alexander J. Basso, "Final Report: Adapting and Testing Business Management Development Programs for Educational Administrators" (January, 1972), ESED #1: Vol. III & IV;ESED #2: Vol. II.

Examples:

ESED #1	ESED #2
Mission Statement	
The mission of the . . . state education agency is to ensure through informed and effective leadership at the state and local levels those learning experiences which are compatible with individual needs, interests, and capabilities and which will lead to continued education and/or employment for all students.	The mission of the . . . state department of education is to ensure that the current and continuing educational needs of the children, youth, and adults of the state are met comprehensively, effectively, and efficiently.
Continuing Objectives	
Consistent with a realistic appraisal of their needs, interests, and abilities, all students in the state of . . . leaving the elementary-secondary schools will: 1. Be qualified to either continue formal education or become employed 2. Demonstrate competencies	To insure that each student completing his elementary-secondary school program: 1. Is prepared to continue his education or to meet the requirements of the job market in a field consistent with his interest and ability. 2. Has a command of the learning skills. . . .

analysis of both organizations including a review of resources and constraints.[4] These are the areas of greatest training site accomplishment.

Neither group was able to complete action on every criterion as originally intended. Less was immediately accomplished on some than on others. While good starts were made on enumerating specific objectives and strategies, this catalogue was not completed at Hamilton. In addition, ESED #1 did not finalize its priorities until later.[5]

> in the arts sufficient to
> enable the student to make
> wise value judgments and
> to make creative use of
> his artistic talents. . . .

[4] Internal Analysis: A catalog of factors which collectively describe the nature of the institution, its capability and limitations; this analysis is to be restricted to those factors which are within the control of the institution and which play a significant role in determining the most appropriate course of action for the institution. Topics considered included: organization, beliefs, characteristics, functions, resources, strengths, and weaknesses.

External Analysis: A catalog and analysis of those factors, outside of the control of the organization, which serve as constraints or whose interaction with the organization determine the appropriate behavior modes for the organization. For each of the critical factors identified the team made explicit assumptions describing expected trends in each of the areas for the planning period. While these factors are beyond the control of the organization there should be a common understanding of the trends, rate of change, and kind of change anticipated in each of the areas. This will insure that all plans will be based on the same assumptions about the future. (AMA definitions.)

A recurring problem in the development of plans according to the AMA process is the absence of any direct contact between the external and internal analyses and the plans subsequently developed. While listing beliefs, assumptions, resources, etc. probably serves a useful "consciousness raising" function by keeping these considerations before participants, the extent to which plans reflected them is questionable.

[5] The subject matter priorities in ESED #1 are early childhood education, career education, human relations, and reading. ESED #2 has established early childhood education, human relations and reading. Of the two states, the priorities in ESED #2 are more obvious and publicized at this point. See:

Reasons given for these postponements included lack of time and qualified personnel and an underestimation of how long it would actually take to lay out an action plan for an entire state education department. According to some persons with whom we talked, delay also served to avoid conflict, especially over the priorities.

> We're just getting around to doing that now; giving priority to some divisions means you have to downgrade others. No one around here wants to get caught in that crossfire. When they do announce the winners and losers, they'll probably do it before dawn one day and then duck to avoid getting their heads blown off.[6]

This deferment was not permanent. In terms of setting things down *on paper* and formally agreeing to them, action had been taken on all criteria once the first phase of training ended and participants returned home.

In any event, what really matters is not a count of the number of objectives, strategies and studies written (either at Hamilton or back in the organizational environment) but an analysis of what has happened to them in the year since training ended. The mission statement and continuing objectives are essentially the same today as they were immediately after training. However, the specific objectives and strategies have been extensively revised for reasons that will become clear below. Typical of both states was the comment that:

State Superintendent, "Memo to Professional Personnel: Strengthening the Department" (November 3, 1971); in addition, the research team has examined a series of pamphlets on educational priorities which has been circulated to external groups and educational agencies.

[6] Executive Staff, ESED #1

To protect the anonymity of interviewees but provide the reader with some information on their hierarchical rank and agency, the following identification system will be used throughout the remainder of this report:

	ESED #1	ESED #2
TOP MANAGEMENT	executive staff	executive staff
MIDDLE MANAGEMENT	division director	division director
PROFESSIONAL STAFF	consultant/specialist	consultant

> They have been revised. The majority of the specific objectives have been discarded to be redeveloped by persons with competence in those areas and worth appropriate input from persons to be affected. So there's no question but that they will be revised and will come out in a somewhat different form.[7]

Specific objectives have been extensively revised by individuals within the SED's who have the competence and responsibility for the specific areas in question. AMA standards of what defines a good objective and other elements of the overall planning process have been retained in both states. Thus, the content has been changed in some areas, thought the AMA structure has been retained.

In dealing with outside constituencies, some changes have had to be made, particularly in ESED #2; they had trouble selling their ideas to the State Board of Education. The State Board found it difficult to understand and accept the plans developed subsequent to AMA training. Except for internal purposes the department had to jettison the AMA terminology ("mission," "continuing objectives," etc.).

> This is another thing that I think wasn't adequately explored in the training with AMA. Your presentation to different audiences, I think, almost has to vary. Do you understand what I mean by that? I'm sure that you do this as you speak to groups. You won't try to snow a PTA group with the same kind of language that you might [use with] a graduate class. I think we learned a valuable lesson. Within the department, within the executive staff of the department at least, we can use a certain kind of terminology. You can even do it with the entire professional staff to some extent - so long as you exercise some care. To a lay board, your approach has to be . . . different. You don't have

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[7] Executive Staff, ESED #2. See also: A comparison of the planning documents produced during AMA training and the latest plans of the various operating divisions in both states made available to the research team.

> to go in and say "This is a continuing objective and this is a specific objective and this is a strategy." You say "This is a major goal; or, this is one of the particular goal areas we want to work in and here are some of the activities associated with it." That's far more understandable; they don't feel like they're being snowed with a lot of jargon, when you approach it in this way.[8]

In terms of the first seven AMA criteria, the "planning process" first introduced to the experimental states at Hamilton has proved more lasting than the form or content of the plans themselves. This is less true of ESED #1 than #2. Developing them was a real learning experience for most participants, although the extent to which the plans represented hard decisions and viable organizational documents remains questionable.

C. Emerging Issues

Some of the questions raised by participants about this part of AMA training are highlighted in the following material, which provide some basis for discussion of the program, possible changes which may be considered now or proposed in the future, and reasons for the attitudes expressed in the next section.[9]

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[8] Executive Staff, ESED #2. See also, "Goals for [ESED #2] Supporting Services," which are the revised planning documents presented to the state board after the initial adverse reaction. Instead of breaking out plans into mission statement, continuing objectives, specific objectives and other elements of the AMA planning process, they presented the state board with this format:

Goals for [ESED #2] Supporting Services

Goal Area: Priority Level:

Justification:

Problem:

Present Status:

Results Desired:

Plan of Action:

This outline is not constant throughout all goal areas but the above headings appear in most of the plans made available to the research team.

1. Baseline Data

One of the reasons why more specific performance criteria were not developed at Hamilton was that the states entered training mostly without data applicable to the Planning Process. To be sure, their expert judgment was sufficient for the statement of generalized mission and continuing objectives. However, the state executives were not prepared to develop behavioral specific objectives and strategies that demand precise percentage targets and deadlines.

For example, not a few thought it rather presumptuous to state that "By 1975, 85% of all 11 year old students will be able to read as determined by appropriate criterion referenced tests" when no baseline data existed to show how many currently read at that level. The intersession period was not sufficiently long to gather this information. In fact, some degree of uncertainty still prevailed in both states six months after training ended (Nov. 1971); the statewide assessment programs underway in both experimental states only began to bear fruit recently.

The absence of supporting data raises some questions as to the reality on which the plans were based. This was made clear to ESED #2 by one of the State Board members:

> One of the things said by a board member, which I thought was beautiful, concerned the reading goals presented to him. I forget what it [the goal] said . . . 80% of all 15 year olds or 12 year olds or something like this, or maybe it said 85%. Whatever it said, his response was "I can't accept that. You have no basis for establishing percentages, no baseline data. For all I know 95% of them might be able to do that now and I'd be saying I'd settle for a 10% drop." He was right; we had no backup data to support our recommendations.[10]

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[9] Selections from personal testimony have already been used as an analytical device in ESED #2 - excerpts from LEA reaction to preliminary SED plans have been written up and made available to the research team and, we assume, to other interested individuals as well.

[10] Executive Staff, ESED #2.

2. Student Behavioral Objectives

An integral part of the AMA approach to educational planning is to focus on changes in student learning. Objectives must be stated in terms of student behavior for this is the end result the organization seeks. This in the AMA view avoids diffusing planning efforts on management concerns which are, after all, means to student achievement cognitively and affectively.

This exclusive concentration on student behavioral objectives has created several problems in the experimental agencies involved in this study. This, in part, may be due to a poor understanding of the central concepts on the part of the individuals who were trained.

First, one of the most frequent comments heard on the state level concerns the frustration participants felt as they tried to state objectives in student behavioral terms. They argue that within the educational system the State Department of Education can deal with students only through the LEA's. It is the LEA's, the argument goes, who determine in the final analysis what will or will not happen to students. Thus, forcing SED personnel to write objectives in student behavioral terms has resulted in some resistance within the SED's involved.

> Yet the biggest difficulty we're going to have and the hangup that AMA has not solved and we haven't solved is how you measure behavioral change in students by objectives that have been set by a state agency which in reality has no direct input to children. We haven't solved that problem. Thus, when we say write objectives in behavioral terms of what's going to happen to kids and then you ask the question of how effective have our objectives been, to what extent have they been reached, we'll never answer it because we are not working directly with children. . . . And I don't know how to settle this. . . . I'm not sure I'll ever know. But I'll tell you one thing, if the insistence on writing objectives this way was toned down you would win the support of most of the consultants overnight for the planning process.[11]

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[11] Executive Staff, ESED #1.

> I think we tried to reach a level of specificity which was unrealistic for our organization, the State Department of Education. I think it would have been far more realistic for a classroom organization, rather than for a state department of education.[12]

On the other hand, some SED personnel think it quite appropriate for objectives to be expressed in terms of student behavior. While sensing the intermediary role of LEA's, they are still convinced that all educational personnel must think primarily in terms of how programs affect student learning. All else merely supports these larger ends.

> We have an effect. The LEA's have an effect. But the name of the game is how both of us can do a better job for students. Concentrating our attention here only on helping LEA's help students would abdicate our responsibility to provide statewide coordination of the education of our young people.[13]

Second, the emphasis on student behavioral change as the primary content of objectives does render supportive services (evaluation, research, budgeting, etc.) peripheral. In ESED #2, these staff offices were discouraged from developing their own specific objectives and relegated to "sustaining strategies." While this may seem a small sacrifice to make in order to permit full concentration on students as clients, it was the source of some resentment. It was eventually realized that, although the exact form may differ, staff roles require the same planning and goal-setting as their line counterparts. This planning "discrimination" is now scheduled for termination. "I'm about ready to admit," stated one division director, "that if the guy in the Finance Department wants an objective relating to how he keeps his books, I'm just as happy calling that an objective as I am a strategy of the Department."[14]

The fact that the development of such objectives in student behavioral terms was never the approach taken by the AMA would seem to indicate a serious misunderstanding of the concepts involved on the part of some participants in the training.

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[12] Executive Staff, ESED #2.

[13] Consultant, ESED #1.

[14] Executive Staff, ESED #2.

Third, the use of percentage figures and deadlines raised some philosophical questions. Some SED personnel wondered whether the department was concentrating only on objectives which could be measured while ignoring those which could not. There was special concern about the affective domain. One person was reminded of an Orwellian experience in which "Big Brother" could ordain that children should learn X amount by Y date. How much of this objection stems from the relative modernity and special jargon of the behavioral approach to instruction is difficult to discern.

3. Selection Process

As mentioned previously, part of the AMA approach is to initiate training with top management. By starting at the top of the hierarchy, they hope to gain the support of the power holders of the organization and to encourage program implementation through their subordinates. It is also believed that certain planning operations (especially the mission statement and continuing objectives) need the broad perspective of those who oversee the whole structure. While this approach may have suited business clients without difficulty, repeating it in the two experimental state educational agencies raised questions.

Taking only the top twelve managers (or Executive Staff) for agency-wide planning (despite the intersession and later involvement of the program services people) excluded those with special expertise in the subject areas covered during training.

> I think that instead of our executive staff going to the training . . ., we would have been well advised to have some of our talented specialists along with us to give us some advice here and there and to clarify the issue a little more than it was.[15]

This did not become apparent until the specific objective phase was reached and preliminary generalizations had to give way to the specificity of deadlines, performance figures, and evaluation strategies. Some respondents felt that they were throwing around numbers and dates without the required background knowledge.

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[15] Executive Staff, ESED #2.

Others objected to the selection process on different grounds. While they conceded that selection by hierarchical level might be satisfactory for corporations, they argued that "top" in public agencies is more complex than in private business. Public agencies are open to pressures from more groups at more levels (e.g., legislature, governor's office, citizen panels, education associations, etc.). These groups often have mutually exclusive interests and values; occasionally these interests are antithetical to those of the State Agency and the AMA program.

Second, by not directly involving State Board members (the public educational equivalent of the corporate board of directors), subsequent embodiment of some aspects of AMA training was made more difficult. Besides the lack of understanding of crucial AMA planning concepts, another factor working against the new planning effort was the unwillingness of some Board members to commit themselves to any long-term plans; they felt such a commitment would mean losing their legitimate powers of review. Involvement in the training process might have ameliorated this problem.

> I think it [the training program] would have had more unity to it if the board could have recognized and seen our phraseology as a good method; but, it's easy to understand why they had difficulty in seeing what we were trying to do. None of them went to AMA with us when we went up there.[16]

Legal constraints is a third factor. The management of the educational agencies was somewhat hamstrung by them, and did not have as much maneuverability for change as some would have liked. It was suggested that some of their "controllers" might also have sat in on the training. Most frequently mentioned as those whose lack of understanding has complicated implementation of plans has been the Controller's Office in ESED #1 and the state personnel officer in ESED #2.

> They've got rules and regulations (I don't know where in the hell they get the rules and regulations from). But

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[16] Executive Staff, ESED #2. One board member from ESED #1 did attend one week of training which may account to some extent for the cooperation of the board in that state.

> we know that if we have a man we know would fit a position and he's in another area, it's hard as the devil to shift. The organization . . . is geared to the same thing every year. Maybe doing a poor job a little bit better or maybe rendering an unneeded service a little bit better.[17]

Fourth, the negative impact of having top management return to the agency with a plan calling more for subordinate consultation than participation was mentioned. Despite the seemingly endless round of meetings, task forces, and study groups, a number of personnel felt that they were being asked to react to a *fait accompli*. Others questioned whether support for the plans would not be threatened by asking people to implement them who did not directly help to develop them. "This is something coming down from the top," one division director told us, "now what are we supposed to do with it?"[18]

We conclude this section by reiterating that these were frequent criticisms and comments about those aspects of AMA training related to the first seven evaluative criteria. They were made by people who participated in the program or who were later in a position to react to it. Some criticisms undoubtedly were prompted by the usual intra-bureaucratic rivalries and reluctance to adapt to novelty. Others may have resulted from a lack of understanding of the planning principles, processes, or the AMA's adaptation of them. Nevertheless, the participants' criticisms cannot be dismissed on these grounds. The issues were raised often enough by people in responsible positions to justify *at least* passing consideration.

Section II: Attitudinal Data

As indicated above, the data presented in this section pertain to the first seven training goals of the AMA. We have divided this section into two sub-areas:

A. Definition of the Mission of the Organization
B. The Development of Organizational Objectives and Priorities

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[17] Executive Staff, ESED #1.

[18] Division Director, ESED #1.

Throughout this section and the balance of the report, the content analysis data will be presented first. This material contains the reactions of the Top Management of the two experimental organizations and the first control state (C1). Relevant questionnaire items which have been drawn from multiple levels of the organizations follow the content data.

In displaying content analysis data, four comments are provided.

1. Interview Question: Question from which the data is drawn.
2. Range of Scale Possibilities: A seven point scale was used for all interview data. Because of the nature of the interview data the terms employed along this scale changed from question to question. In all cases, however, the intensity direction of the scales was the same, i.e., the more positive the response the higher it was rated on the scale; the less positive the response the lower it was rated on the scale.
3. Point of Time: For each item the points of time in which the question was asked will be indicated. (T1=Fall, 1970, T2=Spring, 1971, T3=Fall, 1971, T4=Spring, 1972.) In some cases this will include all four points of time, while in others the data will have been gathered in Y2 only.
4. States: We identify the states to which the category applied.

In the case of the questionnaire data we need to indicate only the points of time for which the question is relevant. The range of scale possibilities was the same in all cases, (1) not at all to (7) very often. The interview questions were asked of all the states. As indicated above, questionnaire items were asked in Control State #2 in points of time T3 and T4 only, because this state was added to the research design in Year 2.

In most cases, training effects were determined on the basis of the T1-T4 comparisons. The research team is most confident of these conclusions. However, due to recent additions of items to the questionnaire or interview, it was sometimes necessary to assign effects after a T3-T4 comparison alone. While the absence of pre-training data (or in some cases control groups) prompts us to be more cautious in our interpretations, we are quite certain our decisions are valid. This is particularly true where we obtained organizational documents to support our analysis (e.g., in the existence of performance standards). Furthermore, the T3-T4 comparisons often include a second Control SED which was not included in T1-T2 and thus could not be included in a T1-T4 comparison. The presence of such multiple measures provides double coverage on many items. For these reasons, we felt justified in attributing positive effects, no effects, or negative effects on T3-T4 as well as T1-T4 comparisons.

But in other cases, the question may only have been asked at one point in time (T4). This is insufficient data on which to base a judgment of training effects, and we made no such judgments. However, the collected data will be presented to give us a better overall perspective. These one-time-items often support comments made earlier relating to actions taken after training. The T4 statements from which data was derived will be displayed in the data summaries of the effects of training following each area to review precisely what items were considered in that section. Nevertheless no judgment is made of what effects, if any, the AMA program may have had on those variables.

A. Definition of the Mission of the Organization

Four perspectives on the question of defining the mission of the organization will be made; these perspectives are provided by three items from the content analysis and one item from the questionnaire.

1. Definition of the Institution's Mission

Interview Question: What do you think you will obtain (obtained) from the AMA's training program?

Range of Scale Possibilities: (1) no value to (7) maximum value.

Points of Time: T1, T2, T3, T4.

States: Experimental State Only (E1 and E2).

2. Sense of SED Mission

Interview Question: What are some of the roadblocks to change in this organization?

Range of Scale Possibilities: (1) major roadblock/always stops change to (7) weak roadblock/seldom stops desired change.

Points of Time: T1, T2, T3, T4.

States: Experimental States (E1 and E2) and Control (C1).

3. Feelings about the Direction the Organization is Moving.

Interview Question: How do you feel about the direction your organization is moving?

Range of Scale Possibilities: (1) not satisfied at all to (7) completely satisfied.

Points of Time: T1, T2, T3, T4.

States: E1, E2, C1.

The Questionnaire item is:

4. The Kinds of Things I am Doing will Make a Long-Term Contribution to Education.

Points of Time: T1, T2, T3, T4.

Item 1 : Definition of the Institution's Mission .

Fall, 1970		Spring, 1971		Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2		E_1 & E_2		E_1 & E_2	
N 4	N 8	N 10	N 11	N 4	N 5	N 3	N 5

Kruskal-Wallis One-Way Analysis of Variance

H= 1.218 Sig.= NS	H= 0.600 Sig.= NS	H= 0.3750 Sig.= NS	H=1.422 Sig.= NS

Binomial Test of Proportions

P=0.037 Sig.= .05	P=0.528 Sig.= NS	P=1.00 Sig.= NS	P=0.507 Sig.= NS

Fall 1970	to	Spring 1972	
E_1 & E_1		E_2 & E_2	
N 4	N 3	N 8	N 5

Kruskal-Wallis One-Way Analysis of Variance

H= 1.125 Sig.= NS	H= 6.942 Sig.= .01

Binomial Test of Proportions

P= 0.349 Sig.= NS	P= 0.213 Sig.= NS

Item 2 : Sense of SED Mission

Fall, 1970						Spring, 1971						Fall, 1971					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 5	N 2	N 9	N 2	N 5	N 9	N 6	N 3	N 4	N 3	N 6	N 4	N 1	N 2	N 2	N 2	N 1	N 2

Kruskal-Wallis One-Way Analysis of Variance

H= 0.000	H= 0.056	H=0.160	H= 0.017	H=0.125	H= 0.102	H=0.000	H= 1.350	H= 1.350
Sig.=NS	Sig.= NS	Sig.= NS	Sig.=NS	Sig.= NS	Sig.=NS	Sig.= NS	Sig.=NS	Sig.=NS

Binomial Test of Proportions

P=0.015	P= 0.000002	P=0.028	P=0.145	P= 0.786	P=0.386	P=0.000	P= 0.765	P=0.778
Sig.=.01	Sig.=.001	Sig.=.05	Sig.=NS	Sig.=NS	Sig.=NS	Sig.= NS	Sig.=NS	Sig.= NS

Spring, 1972						Fall, 1970 to Spring 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & E_1		E_2 & E_2		C_1 & C_1	
N 1	N 2	N 2	N 2	N 1	N 2	N 5	N 1	N 9	N 2	N 2	N 2

Kruskal-Wallis One-Way Analysis of Variance

H=0.000	H=0.000	H= 0.000	H=0.000	H= 0.000	H=0.000
Sig.= NS	Sig.= NS	Sig.= NS	Sig.= NS	Sig.= NS	Sig.= NS

Binomial Test of Proportions

P= 0.000	P=0.000	P=0.000	P=0.0009	P=0.000005	P= 0.273
Sig.=NS	Sig.= NS	Sig.= NS	Sig.=.001	Sig.=.001	Sig.=NS

Item 3 How do you feel about the direction your organization is moving?

Fall, 1970						Spring, 1971						Fall, 1971					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 9	N 11	N 10	N 11	N 9	N 10

Kruskal-Wallis One-Way Analysis of Variance

H= 0.187	H= 6.307	H= 7.680	H= 0.041	H= 9.188	H= 12.608	H= 7.274	H= 0.447	H= 9.375
Sig.= NS	Sig.=.05	Sig.=.01	Sig.= NS	Sig.= .01	Sig.=.001	Sig.=.01	Sig.= NS	Sig.=.01

Spring, 1972						Fall, 1970 To Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & E_1		E_2 & E_2		C_1 & C_1	
N 9	N 11	N 10	N 11	N 9	N 10	N 12	N 9	N 12	N 10	N 12	N 11

Kruskal-Wallis One-Way Analysis of Variance

H= 0.975	H= 2.083	H= 4.335	H= 0.126	H= 0.004	H= 1.591
Sig.= NS	Sig.= NS	Sig.=.05	Sig.= NS	Sig.= NS	Sig.= NS

Item 4 The kinds of things I am doing will make a long-term contribution to education.

	Fall, 1970			Spring, 1971			Fall, 1971			Spring, 1972		
	T1			T2			T3			T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.436	1.553	73	5.630	1.339	68	5.838	1.311	40	5.600	1.057
Experimental SED#2	60	5.467	1.214	51	5.196	1.233	45	5.200	1.439	40	4.975	1.423
Control SED#1	66	5.697	1.301	61	5.393	1.159	67	5.507	1.106	61	5.278	1.253
Control SED#2							61	5.622	1.097	66	5.439	1.151
Total	165			185			241			207		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	0.005	NS	0.959	NS	2.134	NS	0.560	NS
W/Control SED #1	Row	0.096	NS	3.232	NS	4.160	.05	0.060	NS
Experimental SED#1	Col.					1.817	NS		
W/Control SED #2	Row					1.443	NS		
Experimental SED#2	Col.	1.785	NS	0.074	NS	1.587	NS	6.694	.01
W/Control SED #1	Row	3.217	NS	2.642	NS	2.879	NS	2.288	NS
Experimental SED#2	Col.					1.340	NS		
W/Control SED #2	Row					6.324	.02		

Item #1, "*Definition of the Institution's Mission*," was applicable *only* to the two experimental groups. In the Fall of 1970 (when data was gathered prior to the training program) no statistically significant differences existed between the two Experimental States in the *amount of emphasis* given to defining the institution's mission. *Neither did* any differences exist in the Spring of 1971, Fall of 1971, or Spring of 1972 (when data was gathered after the program had been executed). Analysis of each state over time, Fall, 1970 to Spring, 1972, revealed that no change in emphasis occurred in Experimental State #1. A statistically significant change did occur in Experimental State #2; this change was due to *decreased* emphasis being placed on defining the institution's mission as an effect of AMA training. Statistically significant change in the one state was not, however, sufficient to produce differences between the Experimental States in the post-training periods.

The test of proportions was also applied to this item in an effort to answer the question, "Was *awareness* of this variable (independent of emphasis) different between the states, and did it change over time?" Analysis determined that Experimental State #1 was *more* aware than Experimental State #2 of this variable *prior* to training (in the Fall of 1970); but that this difference was not present in the post-training periods (Spring, 1971, Fall, 1971, and Spring, 1972). Neither were there any significant changes in awareness when the two States were analyzed over time (Fall, 1970 to Spring, 1972).

Therefore, training had the effect of *decreasing* the *amount of emphasis* placed on the value of *defining* the institution's mission in Experimental State #2 but had no effect in Experimental State #1. While there were some pre-training differences in *awareness* of this variable with Experimental State #2 *being more* aware than Experimental State #1, neither was more aware than the other in the post-training periods nor did either change over time. (In this context "awareness" simply means the number of people who provided data for this variable.)

From the viewpoint of research design item 2, "*Sense of SED* (State Education Department) *Mission*," provides a more valid basis for evaluation; data for this item was gathered from all three States.

The degree of emphasis given to this domain as a roadblock to change was *not* affected by the training program. Comparison of each Experimental State with the Control State both before and after training revealed no differences between any of the States. And analysis of each State through time (Fall, 1970 to Spring, 1972) also showed no significant change concerning the degree to which the presence or lack of a clear sense of SED mission was seen as a roadblock to organizational change.

In terms of awareness, there were significant differences between the States before training (Fall, 1970). Experimental State #2 (hereinafter called E2) was more aware than Experimental State #1 (hereinafter called E1) of the sense of SED mission being a roadblock to change; and both Experimental States were more aware than the Control State (hereinafter called C1)at this time. After training, these differences no longer existed.

When each State's awareness was assessed over time (Fall, 1970 to Spring, 1972), significant changes were observed in E1 and E2. Both States experienced decreases in their levels of awareness of this variable. There was no change in C1.

The amount of emphasis placed on this variable as a roadblock to change was not affected by the training; in both Experimental States training merely reduced awareness of this variable.

Item #3, "How do you feel about the direction your organization is moving?" was asked in all three States. No differences in satisfaction with organizational direction existed between E1 and C1 before training. In one of the three time periods after training (Fall, 1971), E1 felt significantly better about the direction of their organization than did C1.

Differences did exist between E2 and C1 prior to training; this difference was attributed to C1 which reflected greater satisfaction than E2. Immediately after training (Spring, 1971), this difference was even greater but then lost statistical significance in the last two periods (Fall, 1971 and Spring, 1972).

Comparison of E1 and E2 for both pre- and post-training periods indicated greater satisfaction with the direction in which organization E1 was moving than was the case in E2. These differences were greater immediately after training (Spring, 1971) than before (Fall, 1970) although differences narrowed as time passed (Fall, 1971 and Spring, 1972).

Independent analysis of each of the three States showed no statistically significant change between the Fall of 1970 and the Spring of 1972.

Since all interviewees responded to this question in each of the points of time and comparison, no test of differences in awareness could be made.

Item #4: Fall 1970 to Spring 1971

Item #4, The kinds of things I am doing will make a long-term contribution to education, a questionnaire item, revealed no significant differences existed between either E1 and the Control State or E2 and the Control State which could be attributed to either training (represented by column F on the previous tables) or differences between any combination of these States (represented by row F on the previous tables). The degree to which people in the States believed they were doing things which would make a long-term contribution to education did not change when the pre- and post-training periods are compared (column F in the tables); and, the relative strength of belief between the States (row F in the tables) was not statistically different in either Fall, 1970 or Spring, 1971.

Item #4: Spring, 1971 to Fall 1971

Neither E1 nor E2 changed their opinions of their contribution to education between Spring, 1971 and the Fall of 1971. They felt about as good in T2 as they did in T3. When compared to C1, the Experimental States revealed no significant differences either. This lack of any changes over time or differences between the States indicates that training had no effect on E1 and E2 at this time.

Item #4: Fall 1971 to Spring 1972

Being able to analyze E1 and E2 in contrast to a second Control State (C2) as well as to C1 gives us more confidence that we are getting an accurate picture of what happened in the Experimental States as a result of training. What we see is that the Experimental States did not change in their opinion of how much they were doing for education; however, in relation to C1, E1 indicated more pride in their work while E2 thought they had done less than C2. Nevertheless, these comparative differences had not changed between Fall, 1971 and Spring, 1972. Thus nothing can be credited to the AMA training program.

Item #4: Fall 1970 to Spring 1972

This is the key test of program effects. Unless data clearly show that these organizations are different after than they were before training began, what they did at Hamilton cannot be said to have made any lasting impact on the States. Using this decision rule, it is obvious that the AMA had no effect on E1's self-concept of the importance of their work while it had a negative influence on E2. Not only was E2's opinion of themselves falling faster than C1's, but E2 was becoming more unstable in the extent to which persons in E2 were achieving consensus on this point.

DATA SUMMARY

Definition of the Mission of the Organization

Fall, 1970 - Spring, 1972

Item	Type of Data CONTENT	IMPACT OF TRAINING Positive Effect	No Effect	Negative Effect
1	Definition of the Institution's Mission		E1	E2
2	Sense of SED Mission		E1,E2	
3	Feelings about the direction the organization is moving		E1,E2	
	QUESTIONNAIRE			
4	The kinds of things I am doing will make a long-term contribution to education.		E1	E2

Training had no effect on the value given to defining the institution's mission; in fact, it reduced it in E2. Considered as a roadblock to change, the training again had no effect (positive or negative) in changing the degree to which this was a problem. The tests for awareness, as reflected by the number of people who provided data for this research category, revealed that E1 and E2 became less aware of this variable as a roadblock. This does not mean emphasis changed in either Experimental State; it only means that significantly fewer people mentioned it. Feelings of satisfaction with the direction the organization was moving did not change as a result of training; initial differences which existed prior to training in E1 and E2 were eliminated as a result of training.

The questionnaire item which focused on the degree to which people in the organizations felt they were making a long-term contribution to education revealed a different pattern. No training effects were observed in E1 but persons in E2 felt that the worth of their contributions to education had declined in the pre- to post-training period. Before training began, E2 believed they were making a greater long-term contribution than did E1 people; a year after training had ended, E2 felt they were making a lesser contribution than E1.

Overall, we conclude that the training program had no effect on attitudes about how much a sense of the SEDs' mission constituted an obstacle to organizational change, or how satisfied people were with the direction of their organization in E1 or E2. Nor did training affect E1's attitudes about defining the institution's mission or about how great a contribution to education the respondents were making. But training had the effect of downgrading the value of defining institutional mission and their own contributions to education in E2.

B. The Development of Organizational Objectives and Priorities

The nine items below specifically address the AMA's training goals for the development of objectives and priorities. The first four items are taken from the content analysis and the next five from the questionnaire. As the first three items are content categories of the same interview question, comments below apply to all three.

1. Modify previously established objectives
2. Identify and analyze alternative courses of action
3. Determine priorities

Interview Question: What do you think you will obtain (have obtained) from the AMA's training program?

Range of Scale Possibilities: (1) no value to (7) maximum value.

Points of Time: T1, T2, T3, T4.

States: E1 and E2 only.

4. Do you feel that the objectives developed as a result of AMA training reflect the most serious and pressing needs of state education?

Interview Question: Same - Question acts as content domain in this case.

Range of Scale Possibilities: (1) not at all to (7) definitely.

Point of Time: T3, T4.

States: E1 and E2 only.

The Questionnaire items are:

5. The goals of this organization are articulated.

Points of Time: T1, T2, T3, T4.

6. Our goals are realistic and attainable with our best efforts.

Points of Time: T1, T2, T3, T4.

7. The top priority objectives of state education are clear to me.

Points of Time: T3, T4.

8. I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.

Points of Time: T3, T4.

States: E1 and E2 only. As this and the following item refer specifically to AMA training they were not asked of the control states.

9. As I see it, the operational priorities of the objectives developed during AMA training are clear.

Points of Time: T3, T4.

States: E1 and E2 only.

Item 1 : Modify previously established objectives

Fall, 1970		Spring, 1971		Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2		E_1 & E_2		E_1 & E_2	
N 4	N 8	N 11	N 11	N 7	N 8	N 7	N 9

Kruskal-Wallis One-Way Analysis of Variance

H= 0.028 Sig.=NS	H=0.475 Sig.= NS	H= 0.656 Sig.= NS	H=1.750 Sig.=NS

Binomial Test of Proportions

P=0.0374 Sig.=.05	P=0.702 Sig.= NS	P=0.872 Sig.= NS	P=0.450 Sig.=NS

Fall 1970 to Spring 1972			
E_1 & E_1		E_2 & E_2	
N 4	N 7	N 8	N 9

Kruskal-Wallis One-Way Analysis of Variance

H=1.508 Sig.= NS	H= 3.8912 Sig.= .05

Binomial Test of Proportions

P= 0.000966 Sig.=.01	P= 0.017 Sig.=.05

Item 2 : Identify and analyze alternative courses of action

Fall, 1970		Spring, 1971		Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2		E_1 & E_2		E_1 & E_2	
N 6	N 6	N 6	N 8	N 4	N 4	N 6	N 6

Kruskal-Wallis One-Way Analysis of Variance

H= 1.256 Sig.=NS	H= 1.350 Sig.= NS	H= 1.020 Sig.= NS	H= 3.102 Sig.=NS

Binomial Test of Proportions

P=0.774 Sig.= NS	P=0.354 Sig.= NS	P=0.962 Sig.= NS	P=0.880 Sig.= NS

Fall 1970 to Spring 1972			
E_1 & E_1		E_2 & E_2	
N 6	N 6	N 6	N 6

Kruskal-Wallis One-Way Analysis of Variance

H= 1.442 Sig.= NS	H= 2.5641 Sig.= NS

Binomial Test of Proportions

P= 0.089 Sig.= NS	P= 0.171 Sig.= NS

Item 3 : Determine priorities

Fall, 1970		Spring, 1971		Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2		E_1 & E_2		E_1 & E_2	
N 5	N 7	N 10	N 9	N 9	N 8	N 6	N 10

Kruskal-Wallis One-Way Analysis of Variance

H= 0.949 Sig.= NS	H=0.201 Sig.= NS	H= 0.148 Sig.= NS	H= 0.752 Sig.=NS

Binomial Test of Proportions

P=0.378 Sig.= NS	P=0.644 Sig.= NS	P=0.000 Sig.= NS	P=0.002 Sig.= .001

Fall 1970 to Spring 1972			
E_1 & E_1		E_2 & E_2	
N 5	N 6	N 7	N 10

Kruskal-Wallis One-Way Analysis of Variance

H= 4.408 Sig.= .05	H= 5.485 Sig.=.02

Binomial Test of Proportions

P= 0.066 Sig.=NS	P= 0.000001 Sig.=.001

Item 4 Do you feel that the objectives developed as a result of AMA training reflect the most serious and pressing needs of state education?

Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2	
N 9	N 10	N 9	N 10

Kruskal-Wallis One-Way Analysis of Variance

H= 5.041	H= 2.535
Sig.= .05	Sig.= NS

Binomial Test of Proportions

P= 1.000	P= 1.000
Sig.= NS	Sig.= NS

Fall, 1971 to Spring, 1972			
E_1 & E_2		E_1 & E_2	
N 9	N 9	N 10	N 10

Kruskal-Wallis One-Way Analysis of Variance

H= 0.124	H= 0.142
Sig.= NS	Sig.= NS

Binomial Test of Proportions

P= 1.000	P= 1.000
Sig.= NS	Sig.= NS

Item 5 The goals of this organization are articulated.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.077	1.133	73	4.808	1.497	68	5.411	1.318	40	5.175	1.278
Experimental SED#2	59	4.203	1.648	52	4.096	1.376	45	4.822	1.402	39	4.256	1.463
Control SED#1	65	5.231	1.222	61	4.496	1.501	67	4.895	1.232	59	4.610	1.450
Control SED#2							61	4.737	1.662	66	4.545	1.337
Total	163			186			241			204		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	0.197	NS	8.802	.01	2.175	NS	1.782	NS
W/Control SED #1	Row	7.578	.01	6.368	.05	9.328	.01	1.400	NS
Experimental SED#1	Col.					1.290	NS		
W/Control SED #2	Row					11.914	.001		
Experimental SED#2	Col.	14.319	.001	9.421	.01	4.795	.05	1.856	NS
W/Control SED #1	Row	5.063	.05	1.705	NS	1.207	NS	11.665	.001
Experimental SED#2	Col.					3.327	NS		
W/Control SED #2	Row					0.242	NS		

Item 6 Our goals are realistic and attainable with our best efforts.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	38	5.342	1.047	73	4.945	1.332	68	5.264	1.482	40	5.200	1.042
Experimental SED#2	59	4.610	1.630	51	4.392	1.297	45	5.133	1.217	40	4.750	1.334
Control SED#1	66	5.379	1.092	61	4.902	1.589	67	5.507	1.064	61	5.213	1.156
Control SED#2							61	5.459	1.489	66	5.333	1.167
Total	163			185			241			207		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1 W/Control SED #1	Col.	0.000	NS	8.262	.01	1.221	NS	0.808	NS
	Row	6.288	.05	0.186	NS	0.620	NS	0.006	NS
Experimental SED#1 W/Control SED #2	Col.					0.285	NS		
	Row					0.845	NS		
Experimental SED#2 W/Control SED #1	Col.	11.964	.001	15.491	.001	4.218	.05	0.002	NS
	Row	3.539	NS	5.681	.05	6.439	.05	11.457	.001
Experimental SED#2 W/Control SED #2	Col.					1.919	NS		
	Row					6.120	.05		

Item 7 The top priority objectives of state education are clear to me.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.617	1.425	40	5.400	1.296
Experimental SED#2	45	4.800	1.575	40	4.725	1.552
Control SED #1	67	5.417	1.195	61	5.016	1.431
Control SED #2	61	5.295	1.406	66	4.969	1.380
Total	241			207		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED #1	Col.	2.989	NS
W/Control SED #1	Row	2.652	NS
Experimental SED #1	Col.	2.151	NS
w/Control SED # 2	Row	4.136	.05
Experimental SED #2	Col.	1.437	NS
w/Control SED #1	Row	5.232	.05
Experimental SED #2	Col.	0.949	NS
w/Control SED #2	Row	3.241	NS

Item 8 I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	4.926	1.887	39	5.333	1.131
Experimental SED#2	45	4.333	1.381	39	4.178	1.555
Total	113			78		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED#1 W/Experimental SED#2	Col.	0.024	NS
	Row	16.981	.001

Item 9 As I see it, the operational priorities of the objectives developed during AMA training are clear.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	4.558	1.887	37	5.108	1.264
Experimental SED#2	45	4.200	1.501	39	3.589	1.516
Total	113			76		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED#1	Col.	0.015	NS
W/Experimental SED#2	Row	15.065	.001

There were no significant differences between the two Experimental States in the degree of emphasis given to modification of previously established objectives as a possible benefit of AMA training. Prior to training E2 was more aware than E1 than modification might be a result of training, but this difference disappeared immediately after training and for the two subsequent periods of this evaluation. The changes in awareness observed within E1 and E2 between the Fall of 1970 and the Spring of 1972 are not what they seem; the recorded significance levels are due to the greater number of respondents in T4, not to increasing awareness of this variable. However, negative training effects did occur in E2 between T1 and T4; this organization indicated that their objectives had been modified after training much less than they had expected the objectives to be modified before training. The AMA program was held accountable for this failure to meet E2 expectations.

During the course of this evaluation no significant change took place with regard to item #2. The top managers of the Experimental States experienced no impact from training upon their ability to identify and analyze alternative courses of action.

Item #3 concerning the determination of priorities shows no significant difference between the Experimental States during the period Fall 1970 to Spring 1972. Within both states there was a significant change: by Spring 1972 the top managers in both states placed less emphasis on having developed priorities due to AMA training than they had before training. There was a significant increase in the awareness of priorities in E2, but at the same time the managers emphasized this item less and less as time passed.

Item #4 was asked of the top managers in Fall 1971 and Spring 1972 only. The objectives developed in E1 were seen as more relevant by those managers than the goals developed in E2 in Fall 1971. This difference between the states no longer existed in Spring 1972. Managers in both states viewed the objectives developed as having the same degree of importance. No difference existed within the states over the value of objectives developed during this period.

Item #6: Our goals are realistic and attainable with our best efforts.

Fall 1970 to Spring 1971

On this item State E1 in comparison to Control 1 showed no effects of training. Holding time constant, the two states differed from each other. State E2 did experience a significant training effect. While no significant differences appear between E2 and Control 1, significant change over time did occur. Both states felt their goals were less realistic over time, but E2 experienced more stability than Control 1, which experienced increasing instability.

Spring 1971 to Fall 1971

During this period State E1 experienced a negative training effect. When compared to the Control State 1 E1 experienced a slower increase in the belief that its goals were realistic and greater instability.

State E2 also experienced a negative training effect. Significant change occurred over time and within E1 and Control 1 with both states experiencing increasing mean scores at about the same rate. However, in relation to the Control, E2 was growing stable at a much slower rate.

Fall 1971 to Spring 1972

No significant differences occurred between E1 and either Control 1 or Control 2 during this period. Significant change did occur between E2 and Control 1. Both states experienced weaker support of their organizational goals, but E2 experienced significantly less support than C1 together with greater instability. This indicates a negative training effect.

Fall 1970 to Spring 1972

State E1 experienced no training effect concerning this item. That is, the respondents in this organization saw their organization's goals as no more realistic or attainable in the Spring of 1972 than they had prior to training.

State E2 also did not experience any effect of training on this item. The significant difference between State E2 and C1 continued but did not change over time significantly, indicating no training effect.

Item 7: The top priority objectives of State Education are clear to me.

Fall 1971 to Spring 1972

This item was asked in Y2 only. Over this period the clarity of priorities decreased in all states, though this change was insignificant. No differences existed between State E1 and Control 1 but did exist between State E1 and Control 2. State E2 and Control 1 also showed a significant difference concerning the emphasis given this item. No difference existed between State E2 and Control 2.

Item 8: I feel that the objectives developed during AMA training reflect the most serious and pressing needs of State Education.

Fall 1971 to Spring 1972

This item was asked in the Experimental States during Y2. No significant changes over time were found within the states regarding the value of the objectives developed but there were significant differences between the states. State E1 saw the objectives as being more relevant than did State E2. This difference became greater in the interval between the two periods of questioning. State E1 liked the objectives developed more in the Spring of 1972 than they had in Fall 1971; State E2 liked them less in the Spring than they had during the previous Fall.

Item 9: As I see it, the operational priorities of the objectives developed during AMA training are clear.

Fall 1971 to Spring 1972

This item follows the same pattern as item 8 above. Again, while no statistically significant differences over time existed within the states, there were significant differences between them. State E1 again saw the objectives more favorably than did State E2 and this difference increased with time. State E1's reaction to this item was growing more positive with time while State E2's was becoming more negative. In other words, the staff in State E2 were more clearly comprehending the operational priorities demanded by the objectives, while the personnel of State E2 were becoming less clear.

Item 5: The goals of this organization are articulated.

Fall 1970 to Spring 1971

This item shows no effect of training in State E1 when compared with the Control although the States were significantly different from each other if time is held constant. E2 when compared with the Control shows differences as a result of training and between the States. Goals in E2 were significantly less clear after training than they had been before it.

Spring 1971 to Fall 1971

The degree to which articulated goals were thought to exist increased in all the states between the Spring and Fall of 1971. State E1 experienced a positive effect of training; it significantly increased its goal clarity in relation to the Control State. State E2 also showed a significant effect of training with its goals being more articulated over time although it was not significantly different from the Control, holding time constant.

Fall 1971 to Spring 1972

The clarity of the goals in all the organizations decreased over this period of time. No significant training effects were noted. There were significant differences between State E1 and both Control States holding time constant. E1's goals were more articulated than either of the Control States, but this did not change significantly over time between E1 and either of the Control States.

State E2 and Control State 1 experienced a change over time. Significant differences over time did occur but with no significant change between the States. State E2 and Control 1 both were less clear regarding their goals, with E2 decreasing at a faster rate. But C1 experienced more instability than E2. No differences existed between E2 and Control 2.

Fall 1970 to Spring 1972

A comparison of the pre-training period with the last intervention showed no significant training effects in either Experimental State regarding the degree to which goals were articulated within the organizations. State E1 and Control 1 showed no significant differences over time or in the degree of goal articulation experienced by each state.

State E2 and Control 1 showed no change over time concerning the degree to which these states saw their goals as being articulated. The states significantly differed from each other at both points in time concerning the emphasis given this item.

DATA SUMMARY
Development of
Organizational Objectives
and Priorities

Fall, 1970 - Spring, 1972

		IMPACT OF TRAINING		
Item	Type of Data CONTENT	Positive Effect	No Effect	Negative Effect
1	Modify previously established objectives		E1	E2
2	Identify and analyze alternative courses of action		E1,E2	
3	Determine priorities			E1,E2
4	Do you feel that the objectives developed as a result of AMA training reflect the most serious and pressing needs of state education?		E1,E2	
	QUESTIONNAIRE			
5	The goals of this organization are articulated.		E1,E2	
6	Our goals are realistic and attainable with our best efforts.		E1,E2	
7	The top priority objectives of state education are clear to me.		E1,E2	
8	I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.		E1,E2	
9	As I see it, the operational priorities of the objectives developed during AMA training are clear.		E1,E2	

Analysis of these nine items indicates that overall AMA training exerted negligible effect on how organization members felt about their objectives and priorities.

The two exceptions--organizations where training effects were found--involved content categories, and both cases were negative. The program did not modify E2 objectives (Item 1) nearly so visibly as persons within that organization had predicted before training. This gap between promise and performance constituted a negative training effect. The other exception refers to the determination of priorities (Item 3); both Experimental States placed greater value on this variable prior to training than was given after training.

These findings, however, should be interpreted with all of the caution appropriate to a research design which does not include at least one control group.

None of the questionnaire items revealed any influence of the AMA program. It is interesting to note that E1 thought more of their objectives and priorities than E2 during every time period covered by these items; however, these differences were relatively stable, indicating that they were not attributable to training. Those items that refer specifically to the AMA share with content data the interpretive problem inherent in the lack of a control group.

Despite this qualification, the research team is reasonably certain that the objectives and priorities of the SED's which participated in the team planning process were largely unaffected by it.

AREA II: CAUSAL VARIABLES 8 THROUGH 13; SED'S

In this section, we examine five training goals (8-13) the AMA established for its program, the extent to which they have been accomplished, and the attitudes of the participants toward the goals. In the first part of the discussion below, we examine expected results, actual results, and the major issues raised by the implementation of criteria 8-13. The second part includes a data display and interpretation of expressed attitudes relevant to these criteria.

Section 1: Action

A. Expected Results

To better understand what AMA training accomplished for the organizational planning process, we should first review AMA evaluation criteria 8-13.[19] Review in this case means listing and, where further explanations are necessary, defining terms. The basic AMA definitions for these terms have been used.

8. Made strategic action assignments;

    Action Assignments: Authoritative allocation of responsibility to staff member(s) for specific elements of the plan, planning process, or general administration of the organization. This responsibility becomes part of his job description or overall definition of the responsibilities of his position.

9. Defined standards of performance for key administrators;

    Performance Standards: Statement of what will result if staff member(s) properly discharge an action assignment.

10. Specified task completion dates;

    Task Completion Dates: Statement of when an action assignment is expected to be completed.

11. Designed supplementary planning efforts;

    Supplementary Planning Efforts: Supportive activities undertaken to promote the implementation of the planning process and the plans themselves. These can include: in-service training, planning guidelines, communication of planning concepts throughout the agency, etc.

12. Assigned responsibilities to subordinate units;

    Responsibilities to Subordinate Units: Authoritative allocation of responsibility to an organizational unit for specific parts of the plan or planning process.

13. Designed a methodology by which future performance may be evaluated in relation to the performance specified in the plan;

    Evaluation Methodology: Process by which expected can be compared with actual results.

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[19] AMA, *op. cit.*, pp. 4-5.

B. Actual Results

Here, the question is, what has been done to satisfy these criteria? As with the first seven goals, we are not in a position to assess the relevance or accuracy of these last six where actual behavior is at issue. Our concern is whether written documents were developed, and what form they took. Again, we have summarized our findings on the following chart, followed by an explanation of each item.

SUMMARY OF ACTION FINDINGS
SED LEVEL
AMA CRITERIA 8-13
FALL, 1970 to SPRING, 1972

		Amount of Progress		
No.	Criteria	Minimum	Moderate	Maximum
8.	Made strategic action assignments	E1	E2	
9.	Defined standards of performance for key administrators	E1	E2	
10.	Specified task completion dates	E1	E2	
11.	Designed supplementary planning efforts			E1,E2
12.	Assigned responsibilities to subordinate units		E1,E2	
13.	Designed a methodology by which future performance may be evaluated in relation to the performances specified in the plan	E1,E2		

Strategic action assignments (#8) and those criteria closely connected with it (performance standards (#9) and task completion dates (#10)) can be considered together. Deciding who should do what and when are interrelated elements of the planning process. These decisions are continuous and recur throughout the planning cycle; for the purpose of evaluation this process can be divided into two phases.

The first phase occurred during and immediately after training; it involves initial conceptualizations of the planning process and their introduction into the organization. The second phase is longer term and assesses responsibilities for specific parts of the plans subsequently developed.[20]

Not much can be said about the first phase except that it was largely accomplished. At this early stage, efforts were tentative, preliminary and not susceptible to rigorous judgment. Frequently, accomplishment at this phase meant the gathering of intersession information or explanation of planning concepts prior to the development of departmental plans.

The second phase is intended to extend over a longer period; it is to serve as the basis for quasi-permanent apportionment of powers and duties within the organization. After plans have been written, parts of them are given to the appropriate division. Reading progress might be assigned to instruction; music is referred to cultural arts, etc. Each division in turn gives parts of its specific program to staff within the division, "sub-parts" which refer directly to AMA criteria 8-10.

Taken together, we can refer to them as "job descriptions." Staff agree to adhere to formulations about the position, its responsibilities, and what should be accomplished by a specific date. Action assignments, performance standards, and task completion dates form a unit.

Actual second phase accomplishment varies with the states. ESED #2 has heavily emphasized the production of job descriptions; several divisions have them on paper. ESED #1 has made little progress and still relies on "Request for Position Classification" forms which have been used for many years.[21] This by no means implies that one state has done better than the other in respect to job descriptions;

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[20] An example of a first phase assignment might be to gather feedback from agency personnel on a reading objective. If the objective is approved, implemented and given to a particular unit or individual for attainment, it is characteristic of the second phase.

[21] Form PD-118 (Revised 8-62).

it does reflect different approaches to the development of organizational planning however. In both states internal priorities were established regarding the development of a planning system. ESED #1 concentrated on the development of a Plan for Planning while ESED #2 developed job descriptions. The results of following these different approaches may have implications for the implementation of planning which we discuss in the Emerging Issues section of this chapter.

In any event, since our assignment is to evaluate *what* has been accomplished we intend to examine documents written in both states pertinent to criteria 8-13. For this purpose we have adapted several AMA "Rules for Developing Standards"[22] and applied them to selected job descriptions. These criteria are:

1. CLARITY: Clear statements of:
    - 1.1 action assignments (responsibilities given)
    - 1.2 performance standards (results expected)
2. MEASURABLE:
    - 2.1 expressed in measurable terms
    - 2.2 task completion dates
3. STRUCTURED: Set up in approved form:
    - 3.1 position title and organizational unit
    - 3.2 purpose of position/general responsibilities
    - 3.3 assignments directly compared with performance standards

Both states submitted samples of what they characterized as their latest job descriptions. ESED #2's covered most of their executive staff; ESED #1 scattered its exhibits across several organizational levels.

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[22] James L. Hayes, "Selecting, Appraising, and Developing Top Management Personnel," in Top Management Briefing Manual, The President's Association, The American Management Association.

ASSESSMENT OF SELECTED JOB DESCRIPTIONS

CRITERIA	ESED #1	ESED #2
(1) CLARITY		
1.1 Action Assignments	Found on 2 points on standardized form: under "Explanation" (of position) and "Description of Work," which is redundant. Reasonably clear and understandable.	Most appear to be consise and understandable statements of position responsibilities; consist of short sentences or sentence fragments in series; presented as a unit.
1.2 Performance Standards	Performance standards are not explicit.	Some do not contain performance standards; but most do. Expressed in terms of tasks to be completed rather than ultimate impact on students.
(2) MEASURABLE		
2.1 Measurable Terms	Action assignments expressed in general terms; performance standards not explicit.	Good overall with some overgeneralized. Many performance standards contain % attainment figures.
2.2 Task Completion Dates	None	Inserted where appropriate.
(3) STRUCTURED		
3.1 Position Title and Organizational Unit	Present	Present
3.2 Purpose of Position/ General Responsibilities	Present; under "Explanation" and "Description of Work."	Present; under those titles.
3.3 Assignments directly compared with Performance Standards	No performance standards with which to compare action assignments.	Directly compared; assignments are on one side of the page; performance standards are on the other.

The supplementary planning efforts goal is a catch-all, as supportive activities often are. The activities needed to introduce and implement a planning system are myriad and not easily categorized. Everything could be busywork or it could be vital to the survival of the system. One can never be certain of the importance of supplementary planning until the end result variables are analyzed and evaluated. Supplementary planning efforts are input oriented; final assessments must be postponed until output is examined.

But supplementary planning efforts are essential to fuel the planning system and keep it going. Using organizational reports, we can list some activities begun to supplement planning since the training ended.[23] What has been done is considerable, in both states. Whether these activities are "good" or "bad" is a question which cannot be answered within the confines of this evaluation. Indirect evidence, however, will be provided when we look at what overall planning has accomplished with the assistance of these supplementary efforts.

Inventory of Supplementary Planning Efforts

ESED #1

Educational Planning Studies

1. student unrest
2. legislative priorities
3. educational change survey
4. barriers to educational change
5. attitudes of students toward those of an opposite race
6. 53 experimental programs to improve classroom instruction and school administration
7. 8 experimental programs in career education
8. statewide needs assessment

In-Service Training

1. 14 orientation and training programs within the SED including a three-day planning conference for all professional personnel in program services to develop specific objectives for the 1971-72 school year.

2. orientation and training sessions for LEA's including:

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[23] The major documents utilized to survey supplementary planning efforts included Open-Ended Questionnaires completed by the chief planning officers in each state. In addition memoranda concerning AMA planning were examined; in particular:

A. 1971 Summer Conference for all local superintendents and assistant superintendents in the state (approximately 300) to develop management concepts and practices.

B. 15 superintendents' districts have been allocated staff development funds and are conducting management seminars.

C. 3 projects for 25 LEA's in management and leadership development have been funded by the state board of education with funds appropriated by the General Assembly.

D. Title III ESEA grant is being implemented, providing opportunities for developing management and leadership skills in 8 school systems.

E. Award of a USOE grant to train 6 trainers who in turn will help develop planning competence and plans in all 152 LEA's.

Planning Guidelines

1. Plan for Planning[24]
2. Handbook for Planning[25]

Miscellaneous

1. leadership school for secondary school pupils
2. drafting of plan for accountability

ESED #2

Educational Planning Studies

1. early childhood education
2. reading for 12 year olds
3. human relationships in the schools

ESED #2 State Superintendent, "Memo to Professional Personnel: Strengthening the Department" (3 Nov. 1971); and ESED #1 Assistant Superintendent, "Memo on the Status of SEA & LEA Participation with American Management Association" (14 Oct. 1971).

[24] State Education Agency, A Plan for Planning (March, 1971).

[25] State Education Agency, A Handbook for Planning: Elementary and Secondary Education" (July, 1971).

4. statewide needs assessment (in progress)
5. work on management information system (MIS) plan and approach
6. state evaluation strategy
7. task forces working on specific planning problems

In-Service Training

1. management and planning seminar for the 2 experimental LEA's
2. one half-day orientation session for the Bureaus of Educational Programs and Administrative Services
3. two-day programs for each bureau on management practices with specific emphasis on position descriptions and performance standards

Planning Guidelines

None recent[26]

Miscellaneous

1. management by objectives (MBO) regulation with department wide planning procedures is under review
2. planning and budgeting schedules and procedures have been established for developing budget. FY74 budget will not have substantial amount of new information based on AMA planning format as this crosswalk has been postponed.
3. drafting and passage of accountability legislation.[27]

To some extent, responsibilities have been assigned to subordinate units in the two experimental states. Both have re-emphasized the role of their planning units by adding additional staff and providing more money.

Some reorganization has also occurred. ESED #2 has developed an executive council composed of the superintendent, deputy superintendent, the two associate superintendents, and the coordinator of planning (as an observer/adviser). This group oversees the entire agency on a consultative basis. The agency has been organized into two bureaus: Educational Programs and Administrative Services, with its own council.

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[26] In 1970, a Planning Council within ESED #2 came up with "A Design for Comprehensive Planning" (13 March 1970) but it was never really implemented within the agency. The reason given for this lack of attention was that it was too advanced for its time and was beyond the planning competencies of most of the members of the department at that time.

[27] Public School Laws of ( ), Article 77, Section 28A, "Educational Accountability."

ESED #1 has reorganized itself into six broad areas of responsibility with an assistant superintendent over each. These persons, plus the state superintendent, form the executive staff of the department. At least on a formal, structural basis, both states have stressed the management team as the locus of decisionmaking.

The evaluation system is probably the weakest planning link in both states. Without a completed needs assessment, there is little baseline data on which to compare educational programs over time. This will become clearer in the attitudinal data displays, wherein organizational members were asked to state what specific methods they used to measure whether their continuing and specific objectives were being achieved. While work is going forward in both states, ESED #2 probably has worked more assiduously to "design a methodology by which future performance may be evaluated in relation to performance specified in the plan."[28]

C. Emerging Issues

Many of the issues discussed in reference to criteria 1-7 also apply here. But there are additional questions which have special relevance to this section. As in the preceding section, note of these comments and criticisms does not necessarily mean that the research team agrees with them. We are reporting what seem to us significant issues that were raised about these criteria.

1. Job Descriptions & Plans: A Question of Timing

We have already indicated that one of the reasons for the difference in ESED #1 and #2's comparative work on job descriptions was that ESED #2 more heavily emphasized defining positions and delineating responsibilities than on finalizing their plans. The reverse is true in ESED #1; plans were made first and they are only now detailing agency-wide action assignments and performance standards.

> We just haven't gotten around to it. We put all the planning ducks in a row and decided to take a pot shot at the plans first and save performance standards until later. I guess we could have nailed down standards but

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[28] See for example: "Report of Federal Financial Assistance and Application for Continued Funding for the Planning and Evaluation of Educational Programs" (Section 402, General Education Provisions Act, Section A-3, Attachment #1)."

> we figured it would make more sense . . . to decide on what we're going to do before deciding who's going to do it.[29]

ESED #2 has spent much time in conferences, task forces, and other meetings going over job descriptions for executive and professional staff. Their feeling was that it would be more logical to carefully define what everyone is now responsible for before going on to decide what they will be responsible for under a new plan. Tightening up divisional lines would define the boundaries within which personnel could plan.

Some personnel think this is a worthwhile approach. Others are not so sure. They argue that the sessions devoted to job description writing were a waste of time, straitjacketed all participants, and, given the lack of a related plan, were artificial.

2. Guidelines for Planning

An important part of the AMA planning process is the development of guidelines for planning, i.e., a "blueprint" which teaches departmental personnel how to construct a plan.

ESED #1 went to work immediately after training and developed standardized planning procedures and definitions for use throughout the department. Many persons consider them useful and they are a clear statement of how to go about agency planning.

ESED #2 postponed formal attention to planning guidelines and is now getting around to setting up an "informal task force to answer two questions which the executive council posed: (1) What is the department's plan? and (2) How do you get it? We've come up with two or three alternative models, and a list of standard questions that have to be answered, a planning road map if you will."[30] Planning personnel do not see this delay as a shortcoming; instead they see it simply as "the next step in a continuing evaluation of the planning process for the department."[31]

Some managers, however, feel that they need some written direction, especially the managers whose AMA training was minimal.

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[29] Executive Staff, ESED #1.

[30] Executive Staff, ESED #2.

[31] Ibid.

> I'd like to see us get something that is neat, clean, brief that everybody has that says "This is what you do." Nobody knows what to do now; it's too complicated. But anyway, if somehow the office of planning could come down with something that's a real neat package of "What do I do?" it'd be great. That's what people are looking for. They have to get their hooks into something, and they don't know where to hook into, and that's got to come pretty soon or the whole spirit there is about planning is going to fade.[32]

To be sure, planning personnel have conducted numerous in-service, training sessions about planning. When people leave the session, they seem to think themselves ill-equipped to begin planning on their own. This problem should abate as ESED #2 develops its own plan for planning.

Section 2: Attitudinal Data

The data presented in this section are organized as follows:

A. Mobilization of Organizational Planning
  1. Operational Impact of Organizational Planning
  2. Role of Planning Unit
  3. Development of Evaluation Techniques

B. Top Management Support for Planning

C. Credibility of the Planning Process

The data presented under Mobilization of Organizational Planning pertain to the AMA's training goals eight through 13. These items relate specifically to the operationalization of planning in the experimental agencies which the AMA training goals imply.

In addition, we have also presented data indirectly related to the AMA's training goals but directly related to the establishment and achievement of these goals. Top Management support for planning and the establishment of a credible planning process are viewed here as essential causal variables. The degree to which these variables exhibit change indicates the effectiveness or lack of effect of the training. These variables should also foreshadow the course of future planning developments within those organizations.

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[32] *Ibid.*

A. Mobilization of Organizational Planning

We have divided this sub-category into three parts, each explained separately.

1. Operational Impact of Organizational Planning

The ten items presented here concern the assignment of responsibilities and the development of performance standards essential to any organizational planning effort.

The first six items are content analysis categories. Because the first three items are content categories of the same interview question, the comments apply to all three. The same is true of the next two items. The last four items are taken from the questionnaire.

1. Define standards of performance for key administrators

2. Specify task completion dates and action assignments

3. Assign responsibilities to subordinate units

Interview Question: What do you think you will obtain (have obtained) from the AMA's training program?

Range of Scale Possibilities: (1) no value to (7) maximum value.

Points of Time: T1, T2, T3, T4.

States: E1 and E2 only.

4. Need for Performance Standards

Interview Question: Have performance standards been established for your subordinates based on the objectives in your division plan?

Range of Scale Possibilities: Extent of Use: (1) none at all to (7) definitely. Need for: (1) no value - should not be used at all to (7) should be used much more.

Points of Time: T4.

States: E1, E2, C1.

5. Performance Standards - Extent of Use

6. Existence of Performance Reviews

Interview Question: Do you have regular performance reviews with your subordinates?

Range of Scale Possibilities: (1) still not used to (7) regular performance reviews held.

Points of Time: T4.

States: E1, E2, C1.

The Questionnaire items are:

7. My organization's policy statements are clear.

Points of Time: T1, T2, T3, T4.

8. My organization's performance standards are understood.

Points of Time: T1, T2, T3, T4.

9. Good ways are used to let me know how I can improve my performance.

Points of Time: T1, T2, T3, T4.

10. I understand what results must be produced to achieve the stated objectives of this organization.

Points of Time: T3, T4.

Item 1 : Define standards of performance for key administrators

Fall, 1970		Spring, 1971		Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2		E_1 & E_2		E_1 & E_2	
N 2	N 2	N 9	N 5	N 3	N 6	N 6	N 9

Kruskal-Wallis One-Way Analysis of Variance

H= 0.600 Sig.= NS	H= 0.360 Sig.= NS	H= 1.066 Sig.= NS	H= 0.003 Sig.= NS

Binomial Test of Proportions

P=0.644 Sig.= NS	P=0.028 Sig.= .05	P=0.198 Sig.= NS	P=0.104 Sig.= NS

Fall 1970	to	Spring 1972	
E_1 & E_1		E_2 & E_2	
N 2	N 6	N 2	N 9

Kruskal-Wallis One-Way Analysis of Variance

H= 1.777 Sig.= NS	H= 0.680 Sig.= NS

Binomial Test of Proportions

P= 0.000095 Sig.= .001	P= 0.000001 Sig.= .001

Item 2 : Specify task completion dates and action assignments

Fall, 1970		Spring, 1971		Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2		E_1 & E_2		E_1 & E_2	
N 1	N 3	N 9	N 8	N 3	N 5	N 6	N 4

Kruskal-Wallis One-Way Analysis of Variance

H= 1.800 Sig.= NS	H=0.750 Sig.= NS	H= 0.200 Sig.= NS	H= 3.681 Sig.= NS

Binomial Test of Proportions

P=0.316 Sig.= NS	P=0.702 Sig.= NS	P=0.506 Sig.= NS	P=0.152 Sig.= NS

Fall 1970 to Spring 1972			
E_1 & E_1		E_2 & E_2	
N 1	N 6	N 3	N 4

Kruskal-Wallis One-Way Analysis of Variance

H= 1.5625 Sig.= NS	H= 3.1250 Sig.= NS

Binomial Test of Proportions

P= 0.000001 Sig.= .001	P= 0.078 Sig.= NS

Item 3 : Assign responsibilities to subordinate units

Fall, 1970		Spring, 1971		Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2		E_1 & E_2		E_1 & E_2	
N 2	N 3	N 6	N 4	N 7	N 8	N 7	N 9

Kruskal-Wallis One-Way Analysis of Variance

H= 0.083 Sig.= NS	H=1.136 Sig.= NS	H= 0.000 Sig.= NS	H= 2.042 Sig.= NS

Binomial Test of Proportions

P=0.780 Sig.=NS	P=0.386 Sig.= NS	P=0.872 Sig.= NS	P=0.450 Sig.= NS

Fall 1970 to Spring 1972			
E_1 & E_1		E_2 & E_2	
N 2	N 7	N 3	N 9

Kruskal-Wallis One-Way Analysis of Variance

H=2.142 Sig.= NS	H= 4.521 Sig.= .05

Binomial Test of Proportions

P= 0.000005 Sig.= .001	P= 0.000001 Sig.= .001

Item 4 Need for Performance Standards.

Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 9	N 11	N 10	N 11	N 9	N 10

Kruskal-Wallis One Way Analysis of Variance

H= 0.831 Sig.= NS	H= 0.600 Sig.= NS	H= 2.281 Sig.= NS

Binomial Test of Proportions

P= 1.000 Sig.= NS	P= 1.000 Sig.= NS	P= 1.000 Sig.= NS

Item 5 Performance Standards - Extent of Use.

Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 7	N 11	N 10	N 11	N 7	N 10

H= 0.820 Sig.= NS	H= 0.001 Sig.= NS	H= 0.609 Sig.= NS

P= 0.000 001 Sig.=.001	P= 1.000 Sig.= NS	P= 0.000 Sig.=.001

Item 6 Existence of Performance Reviews

Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 9	N 11	N 10	N 11	N 9	N 10

Kruskal-Wallis One-Way Analysis of Variance

H=7.274 Sig.= .01	H=0.209 Sig.= NS	H= 3.081 Sig.= NS

Binomial Test of Proportions

P= 1.000 Sig.= NS	P= 1.000 Sig.= NS	P= 1.000 Sig.=NS

Item 7 My organization's policy statements are clear.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	38	5.132	1.547	71	5.239	1.439	68	5.176	1.257	40	5.200	1.181
Experimental SED#2	59	4.237	1.622	51	4.020	1.378	45	4.644	1.264	39	4.230	1.441
Control SED#1	66	5.500	1.113	57	5.298	1.322	67	4.912	1.100	59	4.813	1.370
Control SED#2							61	4.606	1.666	66	4.439	1.348
Total	163			179			241			204		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1 W/Control SED #1	Col.	1.363	NS	1.183	NS	0.244	NS	2.919	NS
	Row	0.066	NS	0.267	NS	2.915	NS	0.019	NS
Experimental SED#1 W/Control SED #2	Col.					0.150	NS		
	Row					12.894	.001		
Experimental SED#2 W/Control SED #1	Col.			1.071	NS	2.751	NS	3.471	NS
	Row			21.457	.001	6.726	.01	23.340	.001
Experimental SED#2 W/Control SED #2	Col.					2.026	NS		
	Row					0.175	NS		

Item 8 My organization's performance standards are understood.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	36	5.250	1.273	73	4.932	1.456	68	4.056	1.727	38	4.157	1.305
Experimental SED#2	60	4.200	1.634	52	3.442	1.434	45	3.488	1.290	40	3.350	1.406
Control SED#1	66	5.424	1.302	61	4.738	1.365	67	4.104	1.426	59	4.152	1.284
Control SED#2							61	3.850	1.329	66	3.712	1.224
Total	162			186			241			203		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	0.003	NS	17.896	.001	0.269	NS	39.989	.001
W/Control SED #1	Row	7.440	.01	0.142	NS	0.062	NS	0.219	NS
Experimental SED#1	Col.					0.114	NS		
W/Control SED #2	Row					1.343	NS		
Experimental SED#2	Col.	45.672	.001	2.156	NS	0.056	NS	31.295	.001
W/Control SED #1	Row	15.005	.001	24.911	.001	13.841	.001	28.566	.001
Experimental SED#2	Col.					1.354	NS		
W/Control SED #2	Row					5.690	.05		

Item 9 Good ways are used to let me know how I can improve my performance.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	4.743	1.229	73	4.575	1.342	68	4.558	1.529	40	4.650	1.369
Experimental SED#2	60	3.666	1.612	52	3.346	1.311	45	3.511	1.471	39	3.615	1.330
Control SED#1	65	4.707	1.588	64	4.015	1.768	67	4.149	1.578	60	4.300	1.429
Control SED#2							61	3.934	1.651	66	3.969	1.467
Total	164			189			241			205		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1 W/Control SED #1	Col.	4.569	.05	0.096	NS	0.368	NS	1.473	NS
	Row	2.190	NS	6.589	.05	3.629	NS	0.872	NS
Experimental SED#1 W/Control SED #2	Col.					0.097	NS		
	Row					10.343	.01		
Experimental SED#2 W/Control SED #1	Col.	6.057	.05	0.509	NS	0.378	NS	1.240	NS
	Row	17.286	.001	9.769	.01	10.184	.01	17.529	.001
Experimental SED#2 W/Control SED #2	Col.					0.108	NS		
	Row					3.381	NS		

Item 10 I understand what results must be produced to achieve the stated objectives of this organization.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.397	1.457	40	5.075	1.163
Experimental SED#2	45	4.688	1.427	40	4.325	1.456
Control SED #1	67	4.955	1.353	60	4.800	1.493
Control SED #2	61	4.803	1.661	65	4.615	1.270
Total	241			205		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED #1	Col.	1.649	NS
W/Control SED #1	Row	3.720	NS
Experimental SED #1	Col.	7.693	.01
w/Control SED # 2	Row	1.802	NS
Experimental SED #2	Col.	1.673	NS
w/Control SED #1	Row	3.413	NS
Experimental SED #2	Col.	1.807	NS
w/Control SED #2	Row	0.972	NS

Analysis of items 1, 2, and 3 reveals no change between the Experimental States sustained during the period Fall, 1970 to Spring, 1972. In only one case did one item gain significantly greater emphasis over time within a State; E2's top managers adopted Item #3, assigning more responsibilities to subordinate units in the Spring of 1972 than they did before training.

Within all states, with one exception, a significant increase appeared in the number of top managers who mentioned that the AMA training goals were obtained as a result of training. While E2 would be judged to have shown no effect of training on Item #2, specifying task completion dates and action assignments, all other items indicate positive effects of training.

The next three items assess the use of performance standards and reviews in the experimental organizations.

Item #4, concerning the need for performance standards shows that the top managers of the Experimental and Control States all consider performance standards important. Item #5, indicates more widespread use of performance standards in both the Control and State E2 than in State E1. This finding corresponds with our earlier finding that job descriptions were more widely used in E2 than in E1.

Actual performance reviews are given greater emphasis in E1 than in the Control as indicated in Item #6, but no significant differences exist on this point between States E1 and E2.

Item #7: Fall 1970 to Spring 1971

The seventh item in this section, My organization's policy statements are clear, showed no significant differences in the E1 comparison either over time or holding time constant. In short, no differences between the States and no effect of training were shown. The E2 comparison indicated significant differences which were attributable to training and were produced by a positive effect in State E2; when time was held constant, no difference existed between these States.

Item #7: Spring 1971 to Fall 1971

The AMA program had no effect in either State during this period. We found no statistical difference in how E1 or C1 perceived their organization's policy statements; neither did an analysis of changes between Spring and Fall 1971 yield any real changes. Policy statements were definitely clearer in C1 than in E2, even though C1 showed a minor decrease while E2's understanding rose slightly. These negligible changes were not sufficient to produce T2-T3 differences of any significance.

Item #7: Fall 1971 to Spring 1972

There were also no effects of AMA training during T3-T4. An increase in E1's perception of statement clarity can be compared with a corresponding decrease in C2 to produce a significant difference between them but neither changed sufficiently over time to conclude that training had any impact. E2 and C1 remained essentially static between Fall 1971 and Spring 1972 although a difference still existed between the States--C1 continued to consider its policy statements more understandable than did E2.

Item #7: Fall 1970 to Spring 1972

Examining organizational policy statements, we found that E1 and E2 did not change significantly between Fall 1970 and Spring 1972. A slight increase was recorded in E1 while E2 stayed at approximately the same level. No difference existed between E1 and C1 but continued for E2 and C1; E2 still thought less of what their organization wrote than C1 thought of their documents. Taking a combined Y1-Y2 perspective, then, we conclude that the AMA training program had no effect on the clarity of either E1 or E2's policy statements.

Item #8: Fall 1970 to Spring 1971

Item #8, My organization's performance standards are understood, showed no effects attributable to training in E1 from Fall 1970 to Spring 1971. The States differed, however, in that the Experimental State perceived its performance standards as better understood than was the case in the Control State. State E2 evidenced training effects and proved to be different from the Control. In this case, however, the effect of training was to reduce the extent to which performance standards were understood. The differences between the States was that the Control State perceived that their standards were better understood than those of Experimental State E2.

Item #8: Spring 1971 to Fall 1971

A look at E2 during this period indicates that, while they continued to understand their performance standards much less than C1, no significant change occurred within the State. Therefore E2 was not affected by the AMA program in terms of this aspect of performance standards. Something different occurred in E1, where the organization changed significantly between Spring and Fall 1971, showing a net reduction of comprehension of current standards of performance. Because E1's understanding was declining faster than the Control State's, as well as being more unstable, a negative effect of AMA training was revealed.

Item #8: Fall 1971 to Spring 1972

E1 stabilized between T3 and T4, showing no internal change or external differences with either C1 or C2. Understanding of performance standards remained about the same in E2 also although it was still lower than in C1 as well as, for the first time, C2. Since no State changed between Fall 1971 and Spring 1972, we concluded that AMA training had no impact on E1 or E2.

Item #8: Fall 1970 to Spring 1972

An evaluation of what effect, if any, the AMA training program exerted on E1/E2 understanding of performance standards depends on a direct comparison between data gathered before training began (Fall 1970) and data gathered after training had ended (Spring 1972). In this way we can determine if effects observed during interim periods were permanent or temporary. As far as E1 is concerned any negative effects attributed to AMA training were temporary. While there was an overall decline in how much this organization knew about its performance standards, E1 did not decline as fast as C1; no significant difference existed between them. Therefore, a slight positive effect can be credited to AMA training in E1. It is also clear that the negative impact originally indicated T1-T2 for E2 faded with time. While E2 began and ended lower than any other State and even dropped on a T1-T4 comparison, this drop was not so severe as the decline in C1 nor was it so unstable. We can show a positive effect of AMA training of E2's understanding of performance standards.

Item #9: Fall 1970 to Spring 1971

Training had a positive effect on E1/E2 opinions of the extent to which Good ways are used to let me know how I can improve my performance during this initial period. To be sure, in comparison to E2 better ways were characteristic of C1 both before and after training. E1 remained higher than either E2 or C1. But an analysis of how they changed over time reveals that C1 declined more sharply than did E1 or E2 between Fall 1970 and Spring 1971. Assuming that without AMA training the Experimental States would have experienced a similar rate of decline, we attribute positive effects to E1 and E2.

Item #9: Spring 1971 to Fall 1971

There were statistical differences between C1 and E1/E2 throughout this period; these differences consisted in C1 continuing to feel more positive than did E2 about its means of showing organization members how they might improve performance; but C1 remained more critical of themselves than did E1. Neither E1 or E2 experienced any significant change as a result of AMA training.

Item #9: Fall 1971 to Spring 1972

This comparison adds C2 to our analysis and strengthens our conclusion that performance-related communication was not increased as a result of AMA training between Fall 1971 and Spring 1972. E1 and C1 showed greater approval of their ways to transmit information on individual performance than did C2 or E2. But looking at C1/C1, E1/C2, E2/C1, and E2/C2 over time, no significant changes are shown in E1 or E2.

Item #9: Fall 1970 to Spring 1972

AMA training had no overall impact on the ways in which performance data was communicated in E1 or E2. Neither Experimental State significantly changed its self-appraisal on this issue between Fall 1970 (before training) and Spring 1972 (a year after training had ended). There remained a significant difference between E2 and C1 but this is not relevant to analyzing training effects unless some change was also registered over time within the States.

Item #10: Fall 1971 to Spring 1972

Analysis of Item #10, I understand what results must be produced to achieve the stated objectives of this organization is confined to T3 and T4 although it includes four states: 2 Experimental States and 2 Control States. The only significant comparison involves E1 and C2 between Fall 1971 and Spring 1972, and it reveals a significant change over time. An understanding of what results must be produced has dropped in both States. However, this change is too weak to produce any important differences between E1 and C2.

DATA SUMMARY

Mobilization of
Organizational Planning

Fall, 1970 - Spring, 1972

Item	Type of Data CONTENT	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
1	Define standards of performance for key administrators		E1,E2	
2	Specify task completion dates and action assignments		E1,E2	
3	Assign responsibilities to subordinate units	E2	E1	
4	Need for Performance Standards	Insufficient data (T4 only) on which to base a response.		
5	Performance Standards--Extent of Use			
6	Existence of Performance Reviews			
	QUESTIONNAIRE			
7	My organization's policy statements are clear.		E1,E2	
8	My organization's performance standards are understood.	E1,E2		
9	Good ways are used to let me know how I can improve my performance.		E1,E2	
10	I understand what results must be produced to achieve the stated objectives of this organization.		E2	E1

There were several effects of training on the mobilization of organizational planning. One was negative; three were positive; ten comparisons showed no effect. Understanding of expected results (Item #10) declined more severely in E1 than it did in one of the Control States against which this Experimental State was compared. E2 assigned responsibilities (Item #3) and comprehended its performance standards (Item #8) better as a result of training. While E1 did not improve its assignment process, the staff knew more about their standards of performance.

Training did not alter existing differences between the States, however. When questionnaire items are examined, E1 appears most effective in planning mobilization while E2 was least effective; in fact E2 was less effective than the Control State which had recently entered the AMA program. These relative standings are not consequences of training; they were the same before and after training.

Throughout the periods covered by this evaluation, the extent to which performance standards and expected results were understood declined in both Experimental States. On the other hand, the clarity of policy statements and means of communicating how to improve performance remained comparatively stable between the Fall of 1970 and the Spring of 1972.

The absence of data is due to the previously mentioned fact that Items #4-6 were administered in T4 only and thus we have insufficient data to attribute training effects to AMA. We can say that performance standards seem to be more fully developed in E1 than in C1 during the Spring of 1972. Whether this was one effect of spending several weeks in Hamilton is uncertain.

But data on the other items was sufficient for the research team to assess the impact of the program. On the basis of this evidence, we conclude that training had no effect on most of the variables associated with the mobilization of organizational planning.

2. Role of the Planning Unit

The seven items presented here address the specific activities of the planning units established in both Experimental States prior to AMA training. The items are also conceptually related to the AMA training goal of nurturing supplementary planning efforts. The first six items are content categories of the same interview question, the last item appeared in the questionnaire.

1. Awareness of need to evaluate our programs
2. Available to answer planning questions
3. Writing guidelines for plan development
4. Reviewing and refining plans
5. Provides leadership in the implementation of planning
6. Provides in-service training in planning

Interview Question: How has the planning unit helped you to plan?

Range of Scale Possibilities: (1) no help to (7) great help

Points of Time: T3, T4.

States: E1, E2.

The Questionnaire item is:

7. The planning unit has been helpful to me.

Points of Time: T3, T4.

Item 1 Role of Planning Unit - Awareness of need to evaluate our programs.

Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2	
N 0	N 0	N 2	N 3

Kruskal-Wallis One-Way Analysis of Variance

H= 0.000 Sig.= NS	H= 0.750 Sig.= NS

Binomial Test of Proportions

P= 0.000 Sig.= NS	P= 0.924 Sig.= NS

Fall, 1971 to Spring, 1972			
E_1 & E_2		E_1 & E_2	
N 1	N 2	N 0	N 3

Kruskal-Wallis One-Way Analysis of Variance

H= 1.500 Sig.= NS	H= 0.000 Sig.= NS

Binomial Test of Proportions

P= 0.068 Sig.= NS	P= 0.000 Sig.= NS

Item 2 — Role of Planning Unit - Available to answer planning questions.

Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2	
N 6	N 7	N 8	N 9

Kruskal-Wallis One-Way Analysis of Variance

H= 4.591 Sig.= .05	H= 7.787 Sig.= .01

Binomial Test of Proportions

P= 0.924 Sig.= NS	P= 0.774 Sig.= NS

Fall, 1971 to Spring, 1972			
E_1 & E_2		E_1 & E_2	
N 6	N 8	N 7	N 9

Kruskal-Wallis One-Way Analysis of Variance

H= 0.600 Sig.= NS	H= 3.050 Sig.= NS

Binomial Test of Proportions

P= 0.026 Sig.= .05	P= 0.028 Sig.= .05

Item 3 Role of Planning Unit - Writing guidelines for plan development.

Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2	
N 6	N 3	N 6	N 4

Kruskal-Wallis One-Way Analysis of Variance

H= 3.266 Sig.= NS	H= 6.545 Sig.= .02

Binomial Test of Proportions

P= 0.038 Sig.= NS	P= 0.152 Sig.= NS

Fall, 1971 to Spring, 1972			
E_1 & E_2		E_1 & E_2	
N 6	N 6	N 3	N 4

Kruskal-Wallis One-Way Analysis of Variance

H= 0.006 Sig.= NS	H= 4.500 Sig.= .05

Binomial Test of Proportions

P= 0.377 Sig.= NS	P= 0.150 Sig.= NS

Item 4 Role of Planning Unit - Reviewing and refining plans.

Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2	
N 1	N 5	N 5	N 6

Kruskal-Wallis One-Way Analysis of Variance

H= 0.085 Sig.= NS	H= 4.033 Sig.= .05

Binomial Test of Proportions

P= 0.0002 Sig.= .001	P= 0.964 Sig.= NS

Fall, 1971 to Spring, 1972			
E_1 & E_2		E_1 & E_2	
N 1	N 5	N 5	N 6

Kruskal-Wallis One-Way Analysis of Variance

H= 0.771 Sig.= NS	H= 0.675 Sig.= NS

Binomial Test of Proportions

P= 0.000118 Sig.= .001	P= 0.171 Sig.= NS

Item 5 Role of Planning Unit - Provides leadership in the implementation of planning.

Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2	
N 5	N 6	N 7	N 5

Kruskal-Wallis One-Way Analysis of Variance

H= 1.408 Sig.= NS	H= 3.487 Sig.= NS

Binomial Test of Proportions

P= 0.964 Sig.= NS	P= 0.098 Sig.= NS

Fall, 1971 to Spring, 1972			
E_1 & E_2		E_1 & E_2	
N 5	N 7	N 6	N 5

Kruskal-Wallis One-Way Analysis of Variance

H= 1.114 Sig.= NS	H= 2.408 Sig.= NS

Binomial Test of Proportions

P= 0.141 Sig.= NS	P= 0.366 Sig.= NS

Item 6 Role of Planning Unit - Provides in-service training in planning.

Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2	
N 3	N 4	N 2	N 2

Kruskal-Wallis One-Way Analysis of Variance

H= 1.125 Sig.= NS	H= 2.400 Sig.= NS

Binomial Test of Proportions

P= 0.964 Sig.= NS	P= 0.678 Sig.= NS

Fall, 1971 to Spring, 1972			
E_1 & E_2		E_1 & E_2	
N 3	N 2	N 4	N 2

Kruskal-Wallis One-Way Analysis of Variance

H= 0.750 Sig.= NS	H=3.428 Sig.= NS

Binomial Test of Proportions

P= 0.377 Sig.= NS	P= 0.167 Sig.= NS

Item 7 The planning unit has been helpful to me.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experimental SED#1	68	4.867	1.930	38	4.631	1.323
Experimental SED#2	45	3.644	1.734	40	3.750	1.497
Control SED #1	67	3.746	1.778	53	3.849	1.472
Control SED #2	61	3.737	1.731	64	3.593	1.466
Total	241			195		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED #1	Col.	0.082	NS
W/Control SED #1	Row	16.908	.001
Experimental SED #1	Col.	0.712	NS
w/Control SED # 2	Row	23.185	.001
Experimental SED #2	Col.	0.198	NS
w/Control SED #1	Row	0.184	NS
Experimental SED #2	Col.	0.007	NS
w/Control SED #2	Row	0.019	NS

Items #1 through #6 were asked only in Fall 1971 and Spring 1972 and were framed to compare the roles of the planning units in the Experimental States. Because this question was not asked before training we cannot make any judgments regarding the impact of training on the activities of these planning units. It should be pointed out nonetheless that both planning units were established just before AMA training.

The role of the planning units in developing staff awareness of the need to evaluate programs (Item #1), to provide leadership in the implementation of planning (Item #5), and to offer in-service training (Item #6), showed no differences between the states or within them. An analysis of the number of people who responded indicates that neither planning unit is seen as much affecting evaluation in the planning process or in-service training. Many managers did find that the units gave helpful leadership in the planning process.

An analysis of the role of planning units in assisting the planning process shows that top managers in E1 viewed their unit as being more helpful than did top managers of E2.

Item #2 shows significant differences between the two states. E1 is seen as being more helpful than E2 in Fall 1971 and Spring 1972. Both states showed significantly increasing awareness of the assistance given by their planning units in the planning process.

Item #3 showed that managers in E1 saw the written guidelines for planning as being more helpful than those in E2. This item also indicates that over time the planning unit in E2 appeared less helpful in this regard than was the case in Fall 1971. This probably reflects the development of a plan for planning in E1 which was not produced in E2.

Item #4 indicated a dramatic change in the helpfulness of the planning unit in reviewing and refining plans in E1, by contrast to E2. The planning unit in E1 apparently increased its activity in this area significantly.

Item #7: Fall 1971 to Spring 1972

Item #7, The planning unit has been helpful to me, was used to compare changes in E1 and E2 (as contrasted to C1 and C2) between Fall 1971 and Spring 1972. Analysis reveals that persons in E1 considered their planning unit significantly more helpful than those in C1 or C2, though impressions in no state changed over time. The planning unit in E2, while statistically similar to the Control

States, was viewed as much less helpful by persons in their organization than was its counterpart in E1. A visual inspection of the tables demonstrates that E2 had lower ratings than any State in T3 and lower than any except C2 in T4. To repeat, however, all these differences are statistically insignificant.

DATA SUMMARY

Role of the Planning Unit

Fall, 1970 - Spring, 1972

Item	Type of Data CONTENT	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
1	Awareness of need to evaluate our programs		E1,E2	
2	Available to answer planning questions		E1,E2	
3	Writing guidelines for plan development		E1	E2
4	Reviewing and refining plans		E1,E2	
5	Provides leadership in the implementation of planning		E1,E2	
6	Provides in-service training in planning		E1,E2	
	QUESTIONNAIRE			
7	The planning unit has been helpful to me.		E1,E2	

The services provided by Experimental State planning units to other offices and persons within their organizations were not improved by the AMA training program. When writing guidelines for planning (Item #3) is considered, services were adversely affected. Between Fall 1971 and Spring 1972, E2 felt that their planning unit had become less helpful in this activity.

The reader is again advised to treat this information cautiously. Absence of a control group and pre-training data for comparative purposes do not strengthen our findings.

However, short of attributing training effects, we can make observations and point to certain differences. Neither Experimental State was more aware than the other about any of these items except during T3. In assessing their planning unit's assistance to them then, E2 mentioned "reviewing and refining plans" (14) more than E1; although the data does not tell us if the observations were more favorable or unfavorable.

What people thought about planning services is covered by the analysis of variance. No difference existed between the States on half of the content items; but E1's planning unit was viewed more favorably on the other half. This Experimental State felt that they received more aid in finding answers (Item #2), developing plans (Item #3), and reviewing plans, than did their counterparts in E2. This advantage remained relatively stable over time except in regard to guidelines for plan development; E2 endured such a decline that negative training effects were assigned.

The summary questionnaire item that elicited overall impressions of how helpful a planning unit had been also revealed no training effects. It did indicate that E2's planning unit was considered more helpful than units in E2 or C1, even though this difference was not significant. The data also showed that persons within E2 had achieved greater consensus of opinion about their unit between T3-T4.

3. Development of Evaluation Techniques

This section contains nine items specifically concerned with the use of evaluation techniques in the planning process. The first item represents one of AMA's initial training goals. The next five items are directly related to the goal and to specific evaluation techniques which the states may or may not be using. The last three items are excerpted from the questionnaire and are related to the AMA's goal for evaluation methodology.

1. Designed a methodology by which future performance may be evaluated in relation to the performance specified in the plan

   Interview Question: What do you think you will obtain (have obtained) from the AMA's training program?

   Range of Scale Possibilities: (1) no value to (7) maximum value.

   Points of Time: T1, T2, T3, T4.

States: E1 & E2 only.

Specific Methods of Evaluation:

2. Informal Feedback
3. Performance Reviews[33]
4. Questionnaires
5. Task Completion Inventories[34]
6. Unobtrusive Measures[35]

Interview Question: What specific methods do you use to determine if the continuing and specific objectives of your division are being met?

Range of Scale Possibilities: (1) minimum use to (7) maximum use.

Points of Time: T4.

States: E1, E2, C1.

The Questionnaire items are:

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[33] Performance reviews: oral assessment of progress toward objectives by those within the organization responsible for their attainment. A performance review can be based on many different kinds of evidence; from empirical data gathered by a standardized testing program to the judgment of the person making the review.

[34] Task completion inventories: a superficial assessment of whether tasks demanded by an objective have been accomplished, e.g., books ordered, money appropriated, teachers trained, etc. Such an inventory is heavily quantitative in nature with little systematic attention paid to the quality of accomplishment.

[35] Unobtrusive measures: indices which do not necessarily require the knowledge or cooperation of the person whose program(s) are being evaluated. These measures avoid the problem of reactive effects, i.e., the extent to which the respondent tailors his answer to fit what he thinks the evaluator wants to hear. Examples of this index include organizational documents and observations.

3 OF 7

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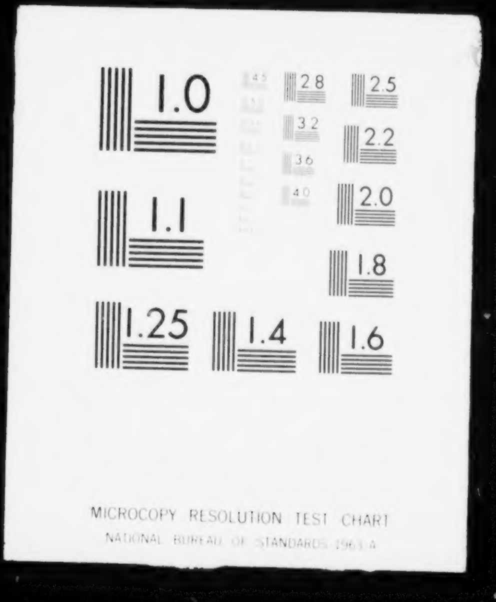
1.0
4.5
2.8
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4.0
2.0
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1.25
1.4
1.6

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

7. I have good ways for knowing how good our results are.

   Points of Time: T1, T2, T3, T4.

8. My organization has reliable ways for knowing how well it is attaining its objectives.

   Points of Time: T3, T4.

9. I think that the objectives developed during AMA training are clearly stated with respect to results expected.

   Points of Time: T3, T4.

Item 1 : Designed a methodology by which future performance may be evaluated in relation to the performance specified in the plan

Fall, 1970		Spring, 1971		Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2		E_1 & E_2		E_1 & E_2	
N 4	N 7	N 8	N 7	N 5	N 3	N 6	N 5

Kruskal-Wallis One-Way Analysis of Variance

Fall, 1970	Spring, 1971	Fall, 1971	Spring, 1972
H= 3.5714 Sig.= NS	H=2.815 Sig.= NS	H= 0.0889 Sig.= NS	H= 1.200 Sig.= NS

Binomial Test of Proportions

Fall, 1970	Spring, 1971	Fall, 1971	Spring, 1972
P=0.144 Sig.= NS	P=0.436 Sig.= NS	P=0.190 Sig.= NS	P=0.426 Sig.= NS

Fall 1970	to	Spring 1972	
E_1 & E_1		E_2 & E_2	
N 4	N 6	N 7	N 5

Kruskal-Wallis One-Way Analysis of Variance

E_1 & E_1	E_2 & E_2
H= 6.545 Sig.= .02	H= 8.076 Sig.= .01

Binomial Test of Proportions

E_1 & E_1	E_2 & E_2
P= 0.008 Sig.= .01	P= 0.409 Sig.= NS

Item 2 Evaluation Techniques Used: Informal feedback.

Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 2	N 4	N 5	N 4	N 2	N 5

Kruskal-Wallis One Way Analysis of Variance

H=1.928 Sig.= NS	H=0.015 Sig.= NS	H=2.400 Sig.= NS

Binomial Test of Proportions

P= 0.612 Sig.= NS	P= 0.548 Sig.= NS	P= 0.178 Sig.= NS

Item 3 Evaluation Techniques Used: Performance reviews.

Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 5	N 2	N 2	N 2	N 5	N 2

Kruskal-Wallis One Way Analysis of Variance

H=0.037 Sig.= NS	H=0.600 Sig.= NS	H=0.150 Sig.= NS

Binomial Test of Proportions

P=0.002 Sig.=.01	P=0.764 Sig.= NS	P=0.050 Sig.= .05

Item 4 Evaluation Techniques Used: Questionnaires.

Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 3	N 4	N 1	N 4	N 3	N 1

Kruskal-Wallis One-Way Analysis of Variance

H= 0.281 Sig.= NS	H= 2.000 Sig.= NS	H= 1.800 Sig.= NS

Binomial Test of Proportions

P= 0.850 Sig.= NS	P= 0.146 Sig.= NS	P= 0.104 Sig.= NS

Item 5 Evaluation Techniques Used: Task Completion Inventories.

Item 6 Evaluation Techniques Used: Unobtrusive measures.

Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 4	N 3	N 1	N 3	N 4	N 1

Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 1	N 2	N 3	N 2	N 1	N 3

Kruskal-Wallis One Way Analysis of Variance

H= 4.500 Sig.= .05	H= 0.200 Sig.= NS	H= 2.000 Sig.= NS

H= 0.000 Sig.= NS	H= 0.000 Sig.= NS	H= 0.800 Sig.= NS

Binomial Test of Proportions

P= 0.402 Sig.= NS	P= 0.292 Sig.= NS	P= 0.025 Sig.= .01

P= 0.984 Sig.= NS	P= 0.624 Sig.= NS	P= 0.292 Sig.= NS

Item 7 I have good ways for knowing how good our results are.

	Fall, 1970			Spring, 1971			Fall, 1971			Spring, 1972		
	T1			T2			T3			T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	4.974	1.202	73	4.876	1.290	68	4.485	1.151	39	4.102	1.231
Experimental SED#2	60	4.450	1.419	50	4.360	1.289	45	3.911	1.164	40	4.050	1.218
Control SED#1	65	5.138	1.073	64	4.796	1.449	67	4.761	1.142	61	4.475	1.324
Control SED#2							61	4.295	1.308	66	4.141	1.289
Total	164			187			241			206		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	1.706	NS	1.687	NS	3.583	NS	19.457	.001
W/Control SED #1	Row	0.062	NS	0.355	NS	3.374	NS	2.381	NS
Experimental SED#1	Col.					3.489	NS		
W/Control SED #2	Row					0.650	NS		
Experimental SED#2	Col.	1.591	NS	1.991	NS	0.185	NS	9.602	.01
W/Control SED #1	Row	10.818	.01	14.046	.001	14.013	.001	10.542	.01
Experimental SED#2	Col.					0.196	NS		
W/Control SED #2	Row					0.897	NS		

Item 8 My organization has reliable ways for knowing how well it is attaining its objectives.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	4.220	1.563	39	4.076	1.305
Experimental SED#2	45	3.600	1.232	40	3.800	1.505
Control SED #1	67	4.552	1.282	61	4.393	1.440
Control SED #2	61	4.409	1.464	66	3.969	1.335
Total	241			206		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED #1	**Col.**	0.638	NS
W/Control SED #1	**Row**	2.933	NS
Experimental SED #1	**Col.**	2.304	NS
w/Control SED # 2	**Row**	0.045	NS
Experimental SED #2	**Col.**	0.011	NS
w/Control SED #1	**Row**	16.371	.001
Experimental SED #2	**Col.**	0.380	NS
w/Control SED #2	**Row**	6.335	.05

Item 9 I think that the objectives developed during AMA training are clearly stated with respect to results expected.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	4.838	1.767	39	5.205	1.128
Experimental SED#2	45	4.177	1.466	39	3.948	1.571
Total	113			78		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED#1	Col.	0.090	NS
W/Experimental SED#2	Row	17.463	.001

Analysis of Item #1 indicates that at no time between the pre-training question and the Spring of 1972 did any change appear in the degree of emphasis or amount of awareness between the two Experimental States.

However, over time within the states there were significant changes. The development of an evaluation methodology was not seen as a result of AMA training in the Spring of 1972 to the extent that staff had hoped this would happen, prior to training. In both states, this was clearly a negative effect of training; the managers in question did not receive what they expected.

Items #2 through #6 were attempts to measure the extent to which certain evaluation techniques were used in the Experimental and Control States. This question was asked in Spring 1972 only.

Items #2, #4, and #6 indicate no difference at all between the states regarding the use of informal feedback, unobtrusive measures, and questionnaires as evaluation methods.

Items #3 and #5 did indicate some significant differences between the states. In both cases State E1 uses more performance reviews and task completion inventories as evaluative methods than either the other Experimental State or the Control State.

It should be noted that possible responses to this question included seven other evaluation techniques which were not mentioned by the respondents at all, or by only one or two persons. This fact, taken with the N's reported above, suggests somewhat inadequate knowledge and use of various evaluative techniques by top managers in these states.

Item #7: Fall 1970 to Spring 1971

Neither E1 nor E2 exhibited any effects of AMA training during this period. E2 did not feel so positive as C1 about its ways for knowing how good its results are, but this difference was as great after training as it had been before. No differences existed between E1 and C1 nor did E1 change its perceptions over time.

Item #7: Spring 1971 to Fall 1971

Analysis revealed no significant changes in E1 or E2; they did not consider their evaluation methods any better or any worse. C1 remained the same as E1 but increased the extent to which means of assessing results were thought superior to the means used in E2.

Item #7: Fall 1971 to Spring 1972

Differences between E2 and C1 in how they felt about the methods used to assess results are narrowed between Fall 1971 and Spring 1972, but remained significant. When compared to C2, E2 showed a similar perception of this variable. Looking at E1 and C1/C2, we can determine no measurable differences between them. There were no significant changes in either Experimental State over time.

Item #7: Fall 1970 to Spring 1972

An assessment based on a comparison of data gathered before and after training (Fall 1970 and Spring 1972 respectively) must conclude that AMA training had negative effects in E1 and positive effects in E2. Although a pre- and post-training analysis reveals net significant declines in E2 and C1's opinion of their evaluation methods, C1 declined at a faster rate than E2 and a great difference appeared between them. E1 reported decreases on this item which were greater than C1 and falling at a more rapid rate. Differences between E1 and C1 were not, however, at significant levels. Nevertheless, negative effects of AMA training in E1 on this variable must be registered.

Item #8: Fall 1971 to Spring 1972

Item #8, My organization has reliable ways for knowing how well it is achieving its objectives, is related to Fall 1971 and Spring 1972 only. While E1 and E2 did not change their opinions between T3 and T4, both generally considered their methods for assessing whether or not they were accomplishing their objectives to be less reliable than did either Control State. E1, however, reversed its position relative to C2 in the Spring. In the case of E2, no reversal occurred and its differences with C1 and C2 remained significant.

Item #9: Fall 1970 to Spring 1972

Data on how persons think that the objectives developed during AMA training are clearly stated with respect results expected could only be gathered from the two Experimental States during Fall 1971 and Spring 1972. The results indicated that there is a significant difference between E1 and E2; E2 does not feel that its objectives are as clearly stated as does E1. No major changes over time for either Experimental State can be reported. However, the absence of a Control State urges caution in ascribing any training effects to any State.

DATA SUMMARY
Development of
Evaluation Techniques
Fall, 1970-Spring, 1972

Item	Type of Data CONTENT	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
1	Designed a methodology by which future performance may be evaluated in relation to the performance specified in the plan			E1,E2
2	Informal Feedback		Insufficient	
3	Performance Reviews		data (T4 only)	
4	Questionnaires		on which to	
5	Task Completion Inventories		base a	
6	Unobtrusive Measures		judgment.	
	QUESTIONNAIRE			
7	I have good ways for knowing how good our results are.	E2		E1
8	My organization has reliable ways for knowing how well it is attaining its objectives.		E1,E2	
9	I think that the objectives developed during AMA training are clearly stated with respect to results expected.		E1,E2	

Evaluation is an underdeveloped area of the planning process in both Experimental States. Of those items for which effects could be determined, there were many more negative than positive effects of training.

The development of an evaluation system (Item #1) was thought more important in both States prior to training than it was after training. This suggests that trainee expectations were not realized; the Experimental States anticipated more than the AMA program was able to deliver in this area.

The questionnaire item about means of assessing results (Item #7) reported that as a result of training E1 considered its ways worse off while E2 thought they had benefited from training. This difference in assigned effects was the result of both States declining in their opinions of their own evaluation techniques. E1 declined faster than the Control State, which constituted a negative effect, while E2 declined more slowly than the Control, which won its positive rating. Attributing positive training effects on the basis of a slower decline should not particularly encourage those who are concerned with educational evaluation.

The remaining questionnaire items revealed that training had no effect; however, contradictory changes did occur. The agencies' evaluative techniques measured by Item #8 became less reliable in E1 and more reliable in E2. Looking at attitudes expressed in Item 9 about how operational were the goals developed during AMA training, we found that E1 thought theirs were more operational over time while E2 believed theirs were less so.

The blank spaces on the summary sheet refer to the inadequate nature of the data gathered for these items, corrected in T4 only. The AMA cannot be held accountable for any of these evaluative variables on the basis of such limited information.

We have already pointed out that, aside from training effects, the six alternative evaluative techniques listed in the data summary are those cited by more than two persons when asked an open-ended question about what techniques they used. Performance reviews were mentioned most often in E1; E2 favored the informal feedback approach to evaluation. The traditional educational measures such as custom-made and standardized tests, written progress reports, and outside evaluators, were hardly mentioned at all. This lack of multiple indices, the basis of any reliable evaluative system, suggests that both States have much work to do in this crucial activity.

For these reasons, the AMA program had mixed effects on the development of evaluative techniques. One item in one State is positive while the other seven items in both States were negative or showed no effects at all. Considering the importance of evaluation to education, the inability of the AMA program to help the States improve performance in this area is unfortunate.

B. Top Management Support for Planning

Inherent in the AMA's training design was the absolute necessity that top management support the planning process. The following eight items were designed to obtain perceptions of organization members about that support (or its absence) and to record any change over time.

1. Adequate Resources (money and information)

2. Control System expressed through decisionmaking process

   Interview Question: What are the roadblocks to change in this organization?

   Range of Scale Possibilities: (1) major roadblock/always stops change to (7) weak roadblock/seldom stops desired change.

   Points of Time: T1, T2, T3, T4.

   States: E1, E2, C1.

The questionnaire items are:

3. My manager makes it clear that he is committed to the success of our projects.

   Points of Time: T1, T2, T3, T4.

4. My manager has expressed the belief that the AMA's training program has been helpful.

   Points of Time: T1, T2, T3, T4.

   States: This item was asked in the Experimental States only.

5. My manager understands planning theory and is able to put it into practice.

   Points of Time: T3, T4.

6. I believe my organization gives me adequate training to do my work effectively.

   Points of Time: T3, T4.

7. I feel good about my manager's ability to plan.

   Points of Time: T3, T4.

8. My manager provides me with adequate support to perform my job.

Points of Time: T3, T4.

Item 1 : Adequate Resources (money and information)

Fall, 1970						Spring, 1971						Fall, 1971					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 9	N 6	N 9	N 6	N 9	N 9	N 10	N 9	N 10	N 9	N 10	N 10	N 7	N 9	N 8	N 9	N 7	N 8
Kruskal-Wallis One-Way Analysis of Variance																	
H=0.222 Sig.=NS		H= 1.003 Sig.=NS		H=0.499 Sig.= NS		H=2.281 Sig.=NS		H= 0.166 Sig.= NS		H=1.851 Sig.=NS		H= 0.280 Sig.= NS		H=0.453 Sig.= NS		H=0.120 Sig.=NS	
Binomial Test of Proportions																	
P=0.108 Sig.=NS		P=0.108 Sig.=NS		P=0.780 Sig.= NS		P=0.644 Sig.=NS		P=0.322 Sig.= NS		P=0.762 Sig.= NS		P=0.584 Sig.= NS		P= 0.433 Sig.=NS		P=0.872 Sig.= NS	

Spring, 1972						Fall, 1970 to Spring 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & E_1		E_2 & E_2		C_1 & C_1	
N 7	N 9	N 6	N 9	N 7	N 6	N 9	N 7	N 9	N 6	N 6	N 9
Kruskal-Wallis One-Way Analysis of Variance											
H=0.179 Sig.= NS		H=0.281 Sig.= NS		H= 0.020 Sig.= NS		H=0.044 Sig.= NS		H=0.031 Sig.= NS		H=0.170 Sig.= NS	
Binomial Test of Proportions											
P= 0.984 Sig.=NS		P= 0.182 Sig.= NS		P=0.326 Sig.= NS		P= 0.300 Sig,= NS		P=0.224 Sig.= NS		P= 0.005 Sig.= .01	

Item 2 : Control System expressed through decision making process

<table>
<tr><th colspan="6">Fall, 1970</th><th colspan="6">Spring, 1971</th><th colspan="6">Fall, 1971</th></tr>
<tr><th colspan="2">E_1 & C_1</th><th colspan="2">E_2 & C_1</th><th colspan="2">E_1 & E_2</th><th colspan="2">E_1 & C_1</th><th colspan="2">E_2 & C_1</th><th colspan="2">E_1 & E_2</th><th colspan="2">E_1 & C_1</th><th colspan="2">E_2 & C_1</th><th colspan="2">E_1 & E_2</th></tr>
<tr><td>N
10</td><td>N
6</td><td>N
11</td><td>N
6</td><td>N
10</td><td>N
11</td><td>N
7</td><td>N
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5</td><td>N
7</td><td>N
5</td><td>N
8</td><td>N
5</td><td>N
7</td><td>N
8</td></tr>
<tr><td colspan="18">Kruskal-Wallis One-Way Analysis of Variance</td></tr>
<tr><td colspan="2">H= 0.497
Sig.=NS</td><td colspan="2">H= 3.093
Sig.=NS</td><td colspan="2">H=1.697
Sig.= NS</td><td colspan="2">H= 0.734
Sig.=NS</td><td colspan="2">H= 0.300
Sig.=NS</td><td colspan="2">H=1.483
Sig.=NS</td><td colspan="2">H= 0.105
Sig.= NS</td><td colspan="2">H=—0.000
Sig.=NS</td><td colspan="2">H= 0.164
Sig.=NS</td></tr>
<tr><td colspan="18">Binomial Test of Proportions</td></tr>
<tr><td colspan="2">P= 0.003
Sig.= .01</td><td colspan="2">P= 0.000
490
Sig.=.001</td><td colspan="2">P=0.428
Sig.= NS</td><td colspan="2">P=0.758
Sig.=NS</td><td colspan="2">P= 0.774
Sig.= NS</td><td colspan="2">P=0.378
Sig.=NS</td><td colspan="2">P= 0.009
Sig.=.01</td><td colspan="2">P= 0.934
Sig.=NS</td><td colspan="2">P=0.872
Sig.= NS</td></tr>
</table>

<table>
<tr><th colspan="6">Spring, 1972</th><th colspan="6">Fall, 1970 to Spring 1972</th></tr>
<tr><th colspan="2">E_1 & C_1</th><th colspan="2">E_2 & C_1</th><th colspan="2">E_1 & E_2</th><th colspan="2">E_1 & E_1</th><th colspan="2">E_2 & E_2</th><th colspan="2">C_1 & C_1</th></tr>
<tr><td>N
4</td><td>N
6</td><td>N
6</td><td>N
6</td><td>N
4</td><td>N
6</td><td>N
10</td><td>N
4</td><td>N
11</td><td>N
6</td><td>N
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6</td></tr>
<tr><td colspan="12">Kruskal-Wallis One-Way Analysis of Variance</td></tr>
<tr><td colspan="2">H=
0.284
Sig.= NS</td><td colspan="2">H=
1.852
Sig.=NS</td><td colspan="2">H=
0.409
Sig.= NS</td><td colspan="2">H=
0.980
Sig.= NS</td><td colspan="2">H=
0.911
Sig.= NS</td><td colspan="2">H=
0.314
Sig.= NS</td></tr>
<tr><td colspan="12">Binomial Test of Proportions</td></tr>
<tr><td colspan="2">P=
0.778</td><td colspan="2">P=
0.934</td><td colspan="2">P=
0.532</td><td colspan="2">P=
0.008</td><td colspan="2">P=
0.006</td><td colspan="2">P=
0.274</td></tr>
</table>

Item 3 My manager makes it clear that he is committed to the success of our projects.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	6.256	0.938	73	6.260	0.850	68	5.955	1.164	40	5.972	1.012
Experimental SED#2	60	6.100	0.933	52	4.846	1.539	45	5.222	1.535	39	4.692	1.608
Control SED#1	66	6.030	1.007	61	5.393	1.497	67	5.895	1.129	61	5.442	1.284
Control SED#2							61	5.573	1.627	66	5.530	1.192
Total	165			186			241			206		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	13.847	.001	0.816	NS	1.737	NS	6.546	.01
W/Control SED #1	Row	4.645	.05	11.622	.001	3.967	.05	7.060	.01
Experimental SED#1	Col.					0.000	NS		
W/Control SED #2	Row					6.154	.05		
Experimental SED#2	Col.	2.133	NS	5.930	.05	6.583	.05	37.291	.001
W/Control SED #1	Row	33.424	.001	8.892	.01	13.813	.001	4.213	.05
Experimental SED#2	Col.					1.890	NS		
W/Control SED #2	Row					8.134	.01		

Item 4 My manager has expressed the belief that the AMA's training program has been helpful.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	38	4.737	1.996	72	5.764	1.379	68	5.544	1.539	40	5.850	1.122
Experimental SED#2	60	4.367	2.099	52	4.423	1.649	45	4.488	1.700	39	4.230	1.856
Total	98			124			113			79		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1 W/Experimental SED#2	Col	4.938	.05	0.170	NS	0.010	NS	2.638	NS
	Row	12.315	.001	35.172	.001	32.943	.001	12.818	.001

Item 5 My manager understands planning theory and is able to put it into practice.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	4.897	1.702	39	5.025	1.404
Experimental SED#2	45	4.511	1.604	40	4.025	1.576
Control SED #1	67	4.940	1.486	61	4.721	1.343
Control SED #2	61	4.590	1.792	66	4.530	1.303
Total	241			206		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED #1	Col.	0.050	NS
W/Control SED #1	Row	0.419	NS
Experimental SED #1	Col.	0.026	NS
w/Control SED # 2	Row	3.596	NS
Experimental SED #2	Col.	2.849	NS
w/Control SED #1	Row	7.260	.01
Experimental SED #2	Col.	1.533	NS
w/Control SED #2	Row	1.756	NS

Item 6 I believe my organization gives me adequate training to do my work effectively.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.102	1.556	40	5.125	1.264
Experimental SED#2	45	4.844	1.429	40	4.550	1.395
Control SED #1	67	4.880	1.571	61	4.852	1.424
Control SED #2	61	4.754	1.608	66	4.651	1.341
Total	241			207		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED #1	Col.	0.000	NS
W/Control SED #1	Row	1.570	NS
Experimental SED #1	Col.	0.042	NS
w/Control SED # 2	Row	4.411	.05
Experimental SED #2	Col.	0.614	NS
w/Control SED #1	Row	0.677	NS
Experimental SED #2	Col.	0.950	NS
w/Control SED #2	Row	0.000	NS

Item 7 I feel good about my manager's ability to plan.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.161	1.653	40	5.525	1.131
Experimental SED#2	45	4.733	1.586	39	4.230	1.580
Control SED #1	67	5.447	1.222	61	5.245	1.337
Control SED #2	61	5.131	1.617	66	5.090	1.249
Total	241			206		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED #1	Col.	0.193	NS
W/Control SED #1	Row	0.000	NS
Experimental SED #1	Col.	0.688	NS
w/Control SED # 2	Row	1.424	NS
Experimental SED #2	Col.	3.166	NS
w/Control SED #1	Row	19.091	.001
Experimental SED #2	Col.	1.654	NS
w/Control SED #2	Row	8.887	.01

Item 8 My manager provides me with adequate support to perform my job.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.691	1.187	40	5.475	1.240
Experimental SED#2	45	5.044	1.364	39	4.410	1.584
Control SED #1	67	5.641	1.214	60	5.183	1.455
Control SED #2	61	5.557	1.565	66	5.257	1.180
Total	241			205		

Two Way Analysis of Variance	T_3 & T_4		
		F	**Signif.**
Experimental SED #1	Col.	3.912	.05
W/Control SED #1	Row	0.999	NS
Experimental SED #1	Col.	2.201	NS
w/Control SED # 2	Row	1.019	NS
Experimental SED #2	Col.	7.781	.01
w/Control SED #1	Row	12.240	.001
Experimental SED #2	Col.	5.479	.05
w/Control SED #2	Row	11.621	.001

Item #1, Adequate Resources (money and information) refers to a perceived obstacle to organizational change. Analysis of the data indicates that inadequate resources hindered change as greatly after the training as they did before it. No differences existed in emphasis or awareness between the Experimental States, nor did they change over time. The AMA training had no effect on this variable as a roadblock to change.

Item #2, Control System expressed through decision-making process, concerns another possible hindrance. Comparisons of the degree of emphasis placed upon the Control system as a roadblock to change reveals no differences between the States before or after training. Neither E1, E2 or C1 changed their impressions over time.

In terms of awareness of this issue, E1 and E2 were more perceptive than C1 before training. E1 was also more aware than C1 in Fall 1971. Examining changes over time (Fall 1970 to Spring 1972), E1 and E2 grew less aware of their Control systems as an obstacle after training than they had been before they entered training.

Item #3: Fall 1970 to Spring 1971

During the immediate pre- post-training period, E1 reflected significant change in the extent to which My manager makes it clear he is committed to the success of our projects; this can be attributed to training. In E1 the effect was to increase managers' commitment. In organization E2 the frequency with which managers expressed commitment to the success of projects was unchanged. Both of the Experimental States differed (independent of time) from the Control on the grounds of how great a commitment was expressed by managers. Managers in E1 expressed significantly more commitment than the Control State's managers and managers in E2 expressed significantly less commitment.

Item #3: Spring 1971 to Fall 1971

The pattern established in T1-T2 was reversed in this period. Instead of further increases in managerial commitment, E1 showed a decrease, albeit insignificant. This decrease did not change the significant difference between E1 and C1; this Experimental State continued to feel their managers were more committed than those in C1. On the other hand, there were negative effects in E2 which were the result of training. Although managers in E2 had become more involved with their subordinates' projects in the Fall as compared to the previous Spring, their counterparts in

Cl had also grown more involved--only more so. Since the Control State, without training, had increased faster than the Experimental State, with training, negative training effects occurred in E2.

Item #3: Fall 1971 to Spring 1972

Between the Fall of 1971 and the Spring of 1972, E1 continued to report that their managers were significantly more committed to project success than did C1 or C2. But this Experimental State did not really change during this time. Thus we cannot conclude that any effects, positive or negative, occurred in E1 because they had been trained in planning techniques by AMA. In comparison to C1, E2 developed even more statistical difference than during T2-T3; this difference (accompanied by a definite decline over time) constitutes another negative effect of training. Managers in E2 were also viewed less favorably in E2 than in C2; yet an E2/C1 comparison indicates no major changes between T3-T4 and therefore no training effect.

Item #3: Fall 1970 to Spring 1972

An analysis of both Experimental States between Fall 1970 and Spring 1972 reveals that training affected each organization differently. E1 underwent a decline in the degree to which managers felt strongly about what their people achieved; but the decline in C1 over the same period was even more pronounced, creating clear differences between them. Hence, AMA training stabilized E1 in relation to C1. The way persons in E2 viewed managerial commitment changed considerably over time; they thought their managers were much less committed one year after training than they had been before. Since the decline in F2 corresponded to a similar, but slower, decline in C1, and was accompanied by greater E2 instability, AMA training influenced managers in this Experimental State to be less clear about their commitment to the success of organizational projects.

Item #4: Fall 1970 to Spring 1971

The fourth item, My manager has expressed the belief that the AMA's training program has been helpful, was not administered in the questionnaire given to the Control State. Therefore, interpretation of this item is somewhat less reliable. The analysis is limited to a comparison of the two Experimental States during the Fall of 1970 to Spring 1971. Analysis indicated that the Experimental States differed in both the extent to which positive attitudes toward the AMA were held by managers and the amount of emphasis they gave their attitude. The first difference was due to a significantly greater amount of belief being expressed by the managers of E1; the second difference was due to E2's managers increasing the frequency with which they expressed positive attitudes toward the training that had been received. Since E2 remained unchanged and E1 did not, we interpret this to mean that a training effect existed in E1 and not in E2.

Item #4: Spring 1971 to Fall 1971

Neither Experimental State changed between Spring and Fall 1971. Managers in E2 were not as expressive as those in E1 about the benefits of AMA training; this difference between the States is significant. No effect of training, however, can be assumed due to the absence of change over time.

Item #4: Fall 1971 to Spring 1972

There were no effects attributable to AMA training during this time. Massive differences continued to exist between E1 and E2 along the same lines as previously; but the greater frequency with which positive opinions were expressed by E2 managers as compared to E1 managers was still insufficient to produce important difference within the States over time.

Item #4: Fall 1970 to Spring 1972

The pattern observed during T2-T3 and T3-T4 also characterized the overall assessment. Managers in E2 were considered less favorably disposed to the AMA program; however, the relative stability of this difference pre- and post-training meant that training did not affect this variable in E1 or E2.

Item #5: Fall 1971 to Spring 1972

Item 5, My manager understands planning theory and is able to put it into practice, is another item relevant to the Experimental States as well as two Control States only at two points of time: Fall 1971 and Spring 1972. Because we have no baseline data on this item gathered before training, we must be cautious about attributing any changes or differences to training. This caution is unnecessary here, because no significant changes or differences occurred in or between the States. The only exception to this general rule is that E2 seems to feel that its managers are less competent in planning than those in C1. This being the only difference, it must be concluded that in E1 and E2, managerial understanding of planning theory and practice as well as managerial ability to put it into practice was unaffected by training.

Item #6: Fall 1971 to Spring 1972

I believe my organization gives me adequate training to do my work effectively, Item 6, shows no differences, with the exception of E1/C2, as we review what these respondents feel about their in-service training programs. If we examine the exception, we find that C2 does not feel as positive as E1 about the training they have received. No reportable changes exist within any State between Fall 1971 and Spring 1972.

Item #7: Fall 1971 to Spring 1972

When evaluating over time E1 and E2 in terms of Item #7, I feel good about my manager's ability to plan, an interesting pattern emerges. Between T3-T4, E1 did not increase their respect for their managers' planning skills, nor were they significantly different in this area from C1 or C2. However, E2, a State that went through AMA training, felt worse about their management's planning competence than the Control States, which had received no comparable training. This difference was not the result of any State's changing over time but of the fact that E2 in T3 scored lower than C1 or C2 and remained in T4 in the same relative position.

Item #8: Fall 1971 to Spring 1972

Item #8, My manager provides me with adequate support to perform my job, was applied in T3 and T4 to all States. In both periods, E2 reported that the support they were able to obtain in performing their jobs was not as adequate as the aid provided in C1 or C2. While both Control States had declined over this period, E2 had declined even more sharply. Making the transition to E1, we find it differs little from C1 or C2 but, compared to C1, E1 has experienced a major decline in perceived support. However, if E1 fell off a little, C1 fell off steeply. Since we have no indication of how the Experimental States felt about the work-related environment before they entered AMA training, we must be careful about presuming that change was caused by AMA intervention.

DATA SUMMARY

Top Management Support for Planning

Fall, 1970-Spring, 1972

Item	Type of Data CONTENT	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
1	Adequate Resources (money and information)		E1,E2	
2	Control System expressed through decisionmaking process		E1,E2	
	QUESTIONNAIRE			
3	My manager makes it clear he is committed to the success of our projects.	E1		E2
4	My manager has expressed the belief that the AMA's training program has been helpful.		E1,E2	
5	My manager understands planning theory and is able to put it into practice.		E1,E2	
6	I believe my organization gives me adequate training to do my work effectively.		E1,E2	
7	I feel good about my manager's ability to plan.		E1,E2	
8	My manager provides me with adequate support to perform my job.	E1		E2

Based on the Content items, we found that in the Experimental States the training program had no effect on attitudes of top administrators toward inadequate resources and the decisionmaking process as obstacles to organizational change. The States did not alter their emphases on the lack of money and adequate information--and the presence of Controls inherent in the decisionmaking process--as barriers which kept them from moving forward. One slight shift appeared in their awareness of these variables as roadblocks; both States mentioned them less in the Spring of 1972 than they had before training began in the Fall of 1970.

Two questionnaire items made it possible to determine that the AMA program affected the Experimental States. Here, the States were moving in opposite directions. Attitudes about the degree of commitment expressed about projects (Item #3) and about support provided for project accomplishment (Item #8) were partially affected in E1 and negatively influenced in E2.

The positive effects attributed to E1 and negative effects assigned to E2 were the only training effects shown on top management support for planning. Aside from the revelation of these two questionnaire items, the analysis brought out no other effects.

Interpretations of the questionnaires must be moderated because of the absence of pre-training data on most items. Without knowing how the organizations felt before training, we have no baseline data against which to compare how they feel now. We lack direct evidence, therefore, on which to build a conclusive argument for the effects we did or did not identify.

By evaluating the relative standing of the Experimental States on these concerns, separate from a consideration of training effects, a very stable ranking is revealed. In almost every comparison, E1 sensed the greatest managerial support for planning during T3-T4. Conversely, the least support is perceived by respondents in E2. The two Control States assume a middle position between the Experimental States on virtually every item.

C. The Credibility of the Planning Process

The following data examine the assumption that planning, to be effective within the organizations, must be thought credible. We are interested in how important planning is to the SED's, and how the training program may have redefined planning's role. There are eight items in this sub-category, four from the interview data and four from the questionnaire.

1. Establish credibility of Planning

Interview Question: What do you think you will obtain (have obtained) from the AMA training?

Range of Scale Possibilities: (1) no value
to (7) maximum value

Points of Time: T1, T2, T3, T4.

States: E1 & E2 only.

2. Role of Planning: how integral

3. Role of Planning: how much is needed

4. Role of Planning: emergence

Interview Question: What is the role of planning in running the state's schools?

Range of Scale Possibilities: how integral:
(1) no value to (7) integral part.
how much is needed: (1) no value/should not be used at all to (7) everything should be planned.
emergence: (1) still not used to (7) long-standing practice.

Points of Time: T1, T2, T3, T4.

States: E1, E2, & C1.

The Questionnaire items are:

5. As I see it, planning is an integral part of running the state's schools.

Points of Time: T1, T2, T3, T4.

6. As I see it, persons in this organization put a lot of effort into planning.

Points of Time: T3, T4.

7. My capability to plan effectively will positively affect my future career in this organization.

Points of Time: T3, T4.

8. The activities relating to planning are having an effect on the policy of this organization.

Points of Time: T3, T4.

Item 1 : Establish credibility of Planning

Fall, 1970		Spring, 1971		Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2		E_1 & E_2		E_1 & E_2	
N 7	N 8	N 8	N 11	N 9	N 10	N 9	N 8

Kruskal-Wallis One-Way Analysis of Variance

H= 1.208 Sig.= NS	H= 0.615 Sig.= NS	H= 1.500 Sig.= NS	H=8.898 Sig.= .01

Binomial Test of Proportions

P=0.736 Sig.= NS	P=0.026 Sig.= NS	P=1.00 Sig.= NS	P=0.000 Sig.= NS

Fall 1970	to	Spring 1972	
E_1 & E_1		E_2 & E_2	
N 7	N 9	N 8	N 8

Kruskal-Wallis One-Way Analysis of Variance

H= 0.100 Sig.= NS	H= 8.040 Sig.= .01

Binomial Test of Proportions

P= 0.000001 Sig.= .001	P= 0.104 Sig.= NS

Item 2 Role of Planning - How integral.

Fall, 1970						Spring, 1971						Fall, 1971					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2	
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
12	12	12	12	12	12	12	12	12	12	12	12	9	11	10	11	9	10

Kruskal-Wallis One-Way Analysis of Variance

H=0.067	H= 5.333	H= 8.500	H=2.430	H= 0.213	H= 1.333	H=5.369	H= 1.042	H= 0.540
Sig.= NS	Sig.= .05	Sig.=.01	Sig.= NS	Sig.=NS	Sig.= NS	Sig.= .05	Sig.= NS	Sig.=NS

Spring, 1972						Fall, 1970 To Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & E_1		E_2 & E_2		C_1 & C_1	
N	N	N	N	N	N	N	N	N	N	N	N
9	11	10	11	9	10	12	9	12	10	12	11

Kruskal-Wallis One-Way Analysis of Variance

H= 7.689	H= 1.042	H= 4.506	H=0.505	H= 0.004	H= 7.841
Sig.= .01	Sig.= NS	Sig.= .05	Sig.= NS	Sig.= NS	Sig.=.01

Item 3 Role of Planning - How much is needed.

Fall, 1970						Spring, 1971						Fall, 1971					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2	
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
12	12	12	12	12	12	12	12	12	12	12	12	9	11	10	11	9	10

Kruskal-Wallis One-Way Analysis of Variance

H= 1.470	H=3.203	H= 0.163	H= 1.470	H=1.687	H= 0.187	H= 0.577	H=0.150	H=0.375
Sig.= NS	Sig.= NS	Sig.= NS	Sig.= NS	Sig.= NS	Sig.=NS	Sig.=NS	Sig.=NS	Sig.=NS

Spring, 1972						Fall, 1970 To Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & E_1		E_2 & E_2		C_1 & C_1	
N	N	N	N	N	N	N	N	N	N	N	N
9	11	10	11	9	10	12	9	12	10	12	11

Kruskal-Wallis One-Way Analysis of Variance

H=0.070	H= 0.150	H=0.481	H=0.247	H= 0.792	H= 2.181
Sig.= NS	Sig.= NS	Sig.= NS	Sig.= NS	Sig.= NS	Sig.= NS

Item 4 Role of Planning - emergence

Fall, 1970						Spring, 1971						Fall, 1971					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2	
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
12	12	12	12	12	12	12	12	12	12	12	12	9	11	10	11	9	9

Kruskal-Wallis One-Way Analysis of Variance

H= 1.687	H= 3.967	H= 2.167	H=0.750	H= 0.213	H= 0.607	H=4.688	H= 0.243	H= 1.754
Sig.= NS	Sig.=.05	Sig.= NS	Sig.= NS	Sig.=NS	Sig.=NS	Sig.= .05	Sig.= NS	Sig.=NS

Spring, 1972						Fall, 1970 To Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & E_1		E_2 & E_2		C_1 & C_1	
N	N	N	N	N	N	N	N	N	N	N	N
9	11	10	11	9	10	12	9	12	10	12	11

Kruskal-Wallis One-Way Analysis of Variance

H= 10.181	H=0.243	H=11.760	H= 3.681	H=3.531	H=8.015
Sig.=.01	Sig.= NS	Sig.= .001	Sig.=NS	Sig.= NS	Sig.= .01

Item 5 As I see it, planning is an integral part of running the state's schools.

	Fall, 1970			Spring, 1971			Fall, 1971			Spring, 1972		
	T1			T2			T3			T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	6.564	0.718	73	6.342	0.961	68	6.691	0.652	40	5.925	1.185
Experimental SED#2	60	6.533	0.853	52	5.712	1.661	45	6.066	1.115	40	5.550	1.632
Control SED#1	66	6.500	0.662	61	6.131	1.310	67	6.402	0.759	61	6.098	1.059
Control SED#2							61	6.278	1.034	66	5.909	1.173
Total	165			186			241			207		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental SED#1 W/Control SED #1	Col.	1.156	NS	7.375	.01	19.835	.001	15.307	.001
	Row	5.315	.05	4.801	.05	0.228	NS	.147	NS
Experimental SED#1 W/Control SED #2	Col.					17.645	.001		
	Row					2.510	NS		
Experimental SED#2 W/Control SED #1	Col.	1.650	NS	3.529	NS	6.793	.01	23.045	.001
	Row	15.679	.001	4.998	.05	7.882	.01	3.208	NS
Experimental SED#2 W/Control SED #2	Col.					6.639	.01		
	Row					2.756	NS		

Item 6 As I see it, persons in this organization put a lot of effort into planning.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experimental SED#1	68	5.147	1.260	40	4.625	1.212
Experimental SED#2	45	4.933	1.355	40	4.075	1.366
Control SED #1	67	4.880	1.409	60	4.550	1.281
Control SED #2	61	4.934	1.515	66	4.439	1.254
Total	241			206		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED #1	Col.	6.012	.05
W/Control SED #1	Row	0.964	NS
Experimental SED #1	Col.	8.303	.01
w/Control SED # 2	Row	1.273	NS
Experimental SED #2	Col.	9.779	.01
w/Control SED #1	Row	1.233	NS
Experimental SED #2	Col.	12.289	.001
w/Control SED #2	Row	0.846	NS

Item 7 My capability to plan effectively will positively affect my future career in this organization.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.764	1.350	39	5.461	1.096
Experimental SED#2	45	5.022	1.815	39	4.564	1.586
Control SED #1	67	5.555	1.317	61	5.032	1.505
Control SED #2	61	5.098	1.660	66	5.015	1.341
Total	241			205		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED #1	Col.	5.212	.05
W/Control SED #1	Row	3.167	NS
Experimental SED #1	Col.	1.060	NS
w/Control SED # 2	Row	8.796	.01
Experimental SED #2	Col.	5.112	.05
w/Control SED #1	Row	5.335	.05
Experimental SED #2	Col.	1.460	NS
w/Control SED #2	Row	1.385	NS

Item 8 The activities relating to planning are having an effect on the policy of this organization.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.250	1.713	40	5.325	1.141
Experimental SED#2	45	5.088	1.411	40	4.350	1.424
Control SED #1	67	4.850	1.416	59	4.694	1.392
Control SED #2	61	4.737	1.504	64	4.484	1.297
Total	241			203		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED #1	Col.	0.042	NS
W/Control SED #1	Row	6.912	.01
Experimental SED #1	Col.	0.207	NS
w/Control SED # 2	Row	11.943	.001
Experimental SED #2	Col.	5.087	.05
w/Control SED #1	Row	0.0724	NS
Experimental SED #2	Col.	6.264	.05
w/Control SED #2	Row	0.299	NS

Item #1, Establish credibility of planning, was applied to E1 and E2 only. It refers to a possible benefit which they might obtain from AMA training. There were no differences in the value each ascribed to this variable prior to training. No differences existed in the two periods immediately after training (Spring 1971 and Fall 1971). However, E1 reported that training established the greater credibility of planning in their organization than in E2 in Spring 1972. E2 also attached less emphasis to this variable as an effect of training in Spring 1972 than they had in Fall 1970. No change occurred in E1.

Awareness of planning credibility followed a similar pattern. E1 changed over the course of the two-year evaluation; this change brought increased awareness. E1's change was not, however, sufficient to create a significant difference between it and E2, before or after training.

Because there was no Control State against which to compare Experimental State responses on this item, results should be modestly interpreted. Nevertheless, we can conclude that E2 was less affected by training (regarding the establishment of planning's credibility) than they had predicted earlier. This is a negative effect of training.

Due to the addition of a Control group, Item #2, Role of Planning: how integral, provides a more solid base on which to interpret effects. Analysis demonstrates no differences in E1/E2 awareness, since all respondents addressed this issue.

Significant differences do appear when we assess the impact of training on the extent to which planning is seen as an integral part of running the state's schools. Although E1 and C1 felt substantially the same before training, a significant difference was measured after training, in Fall 1971 and Spring 1972. The difference consisted of E1's attaching greater importance to planning. The reverse was true for E2 and C1. Compared to the Control State, E2 viewed planning as a less integral part before training. After training, however, there was no difference between E2 and C1. E1 moved from no difference with C1 to a superior position; E2 went from an inferior position to no difference. Both Experimental States improved their position on this variable when compared with the Control State.

These changes were due not so much to heightened awareness in E1 or E2 as to a decrease in C1 between Fall 1970 and Spring 1972. Assuming that without training E1 and E2 would have experienced similar decreases, we conclude that training had a positive effect in both Experimental States.

Item #3, Role of Planning: how much needed, was not different from either Experimental State in relation to the Control either before or after training, and no training effects appeared. The training program did not change top administrators' views of how much planning was needed in the organization.

Item #4, Role of Planning: emergence, shows a dynamic similar to that observed for Item #2. No State was significantly more aware than others about the emergence of planning at any point in time. Neither did any State change over time (Fall 1970 to Spring 1972). All States were equally aware of the variable before and after training.

E1 saw planning as emerging about the same time as did C1 before training; no significant differences were measured. However, in two post-training periods (Fall 1971 and Spring 1972), planning was considered a more recent development in C1 than in E1; this difference increased as time passed. Before training, it was felt that training was a more recent development in E2 than in C1. After training (in Spring 1971, Fall 1971, and Spring 1972) this difference ceased to be significant. E1 still put more emphasis on this item during Spring 1972 than did E2; E1 viewed planning as a longstanding practice.

These improvements of the relative positions of E1 and E2 compared to C1 were not due to a feeling in Experimental States that planning had been around longer, but to the Control States' feeling that planning was a greater novelty than they had reported earlier. If, as in previous items, we presume that E1 and E2 would also have seen planning as a newer practice had they not taken the AMA training, as C1 did not, then the fact that E1 and E2 stayed about the same while C1 decreased is a positive effect of training.

Item #5: Fall 1970 to Spring 1971

Item #5, a questionnaire item, As I see it planning is an integral part of running the state's schools, revealed no change which can be attributed to training in either of the Experimental organizations. In terms of the extent to which planning played an integral role, there was a difference between each of the Experimental States and the Control. Organization E1 saw planning as more integral than did the Control, and organization E2 saw planning as less integral than the Control.

Item #5: Spring 1971 to Fall 1971

Analysis of this item between the Spring and Fall of 1971 reveals a positive training effect in E1 and no effect at all in E2. All States felt that planning was more integral as time passed. The differences over time were not significant in the case of E2 although planning remained less important there than in C1. Planning in E1 became a more integral part than in C1 and the rate of upward movement was faster in the Experimental State than in the Control State. Hence a positive effect of training may be shown for E1.

Item #5: Fall 1971 to Spring 1972

Negative effects were measured in both Experimental States as a result of AMA training. E1 and E2 were less sure that planning was an integral part of running the State's schools than they had been previously or than was either Control State. E1 and E2's confidence in the importance of planning decreased more quickly than C1 or C2 although significant differences appeared in only one comparison: E2 with C1.

Item #5: Fall 1970 to Spring 1972

E1 and E2 felt that planning was not as important for the State's education system in Spring 1972 as they had before training in Fall 1970. C1 also declined over this period. A comparison of the rates of change over this longitudinal period indicates negative effects in E1 and E2.

Item #6: Fall 1971 to Spring 1972

Item #6, As I see it, persons in this organization put a lot of effort into planning: Between Fall 1971 and Spring 1972, the amount of actual work invested in the planning function declined in the Experimental States and the Control States. In all cases, this decline was significant. Looking at all four States in T3, the greatest effort was made by E1 followed by C2, E2, and C1 respectively. These rankings changed in T4. While E1 still led the field, C1 and then C2 were next, with E2 a distant fourth. We must reemphasize here that 1) these inter-state differences with insignificant and 2) due to the lack of pre-training data, the extent to which training effects can be assumed is limited.

Item #7: Fall 1971 to Spring 1972

Item #7, My capability to plan effectively will positively affect my future career in this organization, measures to what degree persons in the Experimental States see a connection between good planning and a successful career. This variable is a satisfactory predictive mechanism for future planning success or failure, since the chance that educational administrators will devote much effort to something they believe irrelevant to their organizational future is minimal. The connections made between planning and a career was more tenuous in T4 than in T3 for E1, E2, and the Control States. Comparing E1 with C1, this decline was significant. The interrelationship between the planning function and personal future weakened in E2 compared to both Control States although only in the case of C1 was the drop significant. E2 also saw the slimmest connection in both periods.

Item #8: Fall 1971 to Spring 1972

Item #8, The activities relating to planning are having an effect on the policy of this organization, is another aspect of the credibility of the planning process which tests how much influence planning exerts upon organizational decisionmaking. If little connection is seen between planning and actual policy, persons within the organization are likely to view planning as busywork rather than an essential management tool. We were concerned with changes in this variable between Fall 1971 and Spring 1972 in both Experimental States. The connection of planning to policy making declined significantly in E2 but was not sufficient to create differences between it and each Control State. E1 showed the greatest influence of planning on policy in T3 and in T4. The significant difference between this Experimental State and the Control States was more a function of stability than of change over time. E1 started and finished by making the closest connection; E2, on the other hand, immediately followed E1 in T3 but fell to last in T4. It seems particularly significant that a State with substantial training and involvement in planning could believe that planning and policy were more distantly connected than did two Control States which had far less planning experience.

DATA SUMMARY
The Credibility of the Planning Process
Fall, 1970 - Spring, 1972

Item	Type of Data CONTENT	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
1	Establish credibility of planning		E1	E2
2	Role of Planning: how integral	E1,E2		
3	Role of Planning: how much is needed		E1,E2	
4	Role of Planning: emergence	E1,E2		
	QUESTIONNAIRE			
5	As I see it, planning is an integral part of running the state's schools.			E1,E2
6	As I see it, persons in this organization put a lot of effort into planning.			E1,E2
7	My capability to plan effectively will positively affect my future career in this organization.	E1,E2		
8	The activities relating to planning are having an effect on the policy of this organization.		E1	E2

Credibility of organizational planning among top administrators was significantly affected by the AMA training program. Out of the eight variables (4 content categories and 4 questionnaire items) which constitute our analysis of the credibility of the planning process, only one (Item #3) exhibited no training effects at all.

An evaluation of the content data indicated that the AMA program furthered the credibility of planning in the Experimental States. The meaning of the first of these items should be regarded cautiously due to the lack of a control group and the consequent problem of validity of interpretation. Nevertheless, AMA training established the credibility of planning about as solidly as E1 had expected prior to training, but not so firmly as E2 wanted. In reference to attitudes about the role of planning, E1 and E2 experienced positive effects in making planning a more integral part of running the State's schools (Item #2) as well as a practice of longer standing (Item #4). Both Experimental States attached similar levels of importance to planning before and after training, so no effects were attributed to the AMA on Item #3.

On the other hand, more negative than positive effects appeared when we reviewed the questionnaire items, though the lack of pre-training information prompted us to be careful in assigning these effects. The Experimental States viewed planning as less integral (Item #5) and as an activity to which organization members devoted less effort (Item #6) as time passed. Furthermore, the influence of planning on policy (Item #8) within E2 seemed to diminish as a consequence of planning; E1's sense of its influence was unchanged. The single positive training effect was the firm connection made between planning skills and career development; both States thought the connection had been strengthened by training.

The emergent patterns of questionnaire items in earlier sections appear again here. On the basis of mean scores, E2 generally thought planning was least credible, while E1 believed that planning had greatest credibility in their organization.

No overall conclusion is made as to the total impact of training on the credibility of the planning process. The evidence is mixed and somewhat contradictory (e.g., concerning how integral a role planning plays). Our assessment of training effects on planning credibility must rest on an individual analysis of the various items which comprised the section. On this evidence the reader may or may not wish to draw overall conclusions.

AREA III: LOCAL EDUCATIONAL AGENCY DATA

The purpose of this section is to study the impact of AMA training on the Experimental Local Education Agencies (LEA's) in terms of the causal variables discussed earlier.[36] We again look at the thirteen criteria listed by the AMA as the basis of evaluating the program (Expected Results).[37] The extent to which the AMA was able to work through the LEA's to achieve each goal is then considered (Actual Results). What participants think about what AMA did is summarized and displayed in tabular form (Attitudinal Data). Finally, we offer conclusions which rest on a combination of results and attitudes.

Besides using the scaled and open response questionnaires as information resources for this section, we examined the original planning documents produced at Hamilton.[38] From these sources we sought a rounded appraisal of the status of the thirteen criteria applicable to the LEA's which underwent AMA training.

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[36] The symbols used here to denote Bxperimental and Control local education agencies are the same as diagrammed in an earlier section:

SYMBOLS USED

ELEA #1 = experimental local education agency in same State as ESED #1
ELEA #2 = experimental local education agency in same state as ESED #1
CLEA #1 = control local education agency in same state as ESED #1
ELEA #3 = experimental local education agency in same state as ESED #2
ELEA #4 = experimental local education agency in same state as ESED #2
CLEA #2 = control local education agency in same state as ESED #2

[37] AMA, op. cit., pp. 4-5.

[38] Klawuhn and Basso, op. cit., Appendices.

ELEA #1 = Vol. IV
ELEA #2 = Vol. V
ELEA #3 = Vol. II
ELEA #4 = Vol. III

Section 1: Action

A. Expected Results

To facilitate our review, we repeat the thirteen criteria previously described. Refer to the SED Expected Results section for more detailed definitions of terms.

1. agreed upon a definition of the institution's *mission*;
2. established *continuing objectives* and planning procedures for long range achievement of the institution's mission;
3. identified *resources and constraints*;
4. differentiated between where the institution *is* and where it *wants* to go;
5. modified previously established *objectives*;
6. identified and analyzed *alternative courses of action*;
7. determined *priorities*;
8. made strategic *action assignments*;
9. defined *standards of performance* for key administrators;
10. specified *task completion dates*;
11. designed *supplementary planning efforts*;
12. assigned *responsibilities to subordinate units*;
13. designed a *methodology* by which future performance may be *evaluated* in relation to the performances specified in the plan.

B. Actual Results

We will address the question of what has been done in each LEA to satisfy each criterion. Since we did not interview participants nor collect as much written information as from the SED's, our analysis will be shorter and more tentative than the one presented for the SED's. Enough data is available to draw an outline of LEA progress and to give some indication of future directions.

It is well to re-emphasize here that it is not within the scope of this evaluation to examine the feasibility or relevance of what the agencies have written. Assumptions, beliefs, missions, etc. are largely personal statements beyond empirical verification. Other elements are based on in-house data beyond reasonable external analysis. Our purpose, therefore, is simply to determine to what extent participants did what AMA said they would do. To put it more bluntly, we wish to see if paper was produced in correspondence to the thirteen criteria.

Consequently, we have devised the following "Summary of Action Findings: LEA Level" chart to assess progress toward each criterion. To keep within the scope of this evaluation, consideration of progress is limited to quantitative rather than qualitative concerns. When we indicate "minimum, "moderate," or "maximum" progress this is not to be interpreted as "poor," "average," or "excellent." It should be interpreted as *how much* work was done on a criterion, not *how good* that work may have been.

SUMMARY OF ACTION FINDINGS [39]
LEA LEVEL
AMA CRITERIA 1-13
FALL, 1970 to SPRING, 1972

No.	Criteria	Amount of Progress		
		Minimum	Moderate	Maximum
1.	Agreed upon a definition of the institution's mission			EL1,EL2, EL3,EL4
2.	Established continuing objectives and planning procedures for long-range achievement of the institution's mission			EL1,EL2, EL3,EL4
3.	Identified resources and constraints		EL1,EL2, EL3,EL4	
4.	Differentiated between where the institution is going and where it wants to go	EL3	EL1,EL2, EL4	
5.	Modified previously established objectives		EL1,EL2, EL3,EL4	
6.	Identified and analyzed alternative courses of action	EL3	EL1,EL4	EL2
7.	Determined priorities	EL1,EL2, EL3,EL4		
8.	Made strategic action assignments	EL3	EL2,EL4	EL1
9.	Defined standards of performance for key administrators.	EL1, EL2, EL3,EL4		
10.	Specified task completion dates		EL1,EL3	EL2,EL4
11.	Designed supplementary planning efforts	EL3	EL1, EL2,EL4	
12.	Assigned responsibilities to subordinate units		EL1,EL2, EL3,EL4	
13.	Designed a methodology by which future performance may be evaluated in relation to the performances specified in the plan	EL1,EL2 EL3,EL4		

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[39] On all charts used in the action and attitude

In terms of activity directed toward the accomplishment of the AMA training goals, the Experimental LEA's took some steps toward nearly every objective. Led through the step-by-step structured planning exercise, they addressed all the criteria enumerated in the original AMA proposal.

The greatest, most uniform progress was made on the first and second criteria. The institutions' *missions* were defined, and a set of continuing objectives were written. Each mission and *continuing objectives* series was somewhat different; some documents were more detailed than others. The essential point is that the mission and continuing objectives which AMA promised to produce were, in fact, written.

Comparable degrees of progress toward criteria 3 and 4 were made in the Experimental LEA's, which went to considerable lengths to analyze their environment; part of this self-examination was some identification of *resources and constraints*. Implied in their examinations was an *analysis of where the institution is going and where it wants to go*.

As with most of the elements of the planning process experienced by the teams, the degree to which particular criteria or topics are developed depends heavily upon the interests, abilities, and data available to the teams. ELEA #2 generated all kinds of data on pupil achievement, budgetary trends, etc. ELEA #4 seemed to develop a thorough list of cost reduction strategies based on available resources. Conversely, ELEA #3's minimum rating was dictated by the *relatively* slight documentation they had on the current status of their programs and institutional environment.

The modification of previously established objectives was accomplished by the development of *specific objectives* (criterion 5). These specific objectives were written to correspond to--and be grouped under--the continuing objectives. In many instances, a set of specific objectives did not seem to have been completed for the continuing objective(s). But the expected results, client groups, and deadlines were clearly evident in those which were completed.

Strategies contribute to the achievement of specific objectives and are covered by the sixth criterion (identified

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sections to refer to LEA's, these short-form symbols will be used:

ELEA #1 = EL1
ELEA #2 = EL2
ELEA #3 = EL3
ELEA #4 = EL4
CLEA #1 = CL1
CLEA #2 = CL2

and analyzed alternative courses of action). They often appeared in a standardized format:

Area Strategized (Objectives, Strengths, Weaknesses, Planning Gap, etc.)

Strategy: Costs:

Program: Manpower:

Task--Action Assignments Responsibility Due Date

Just as every continuing objective did not list all of the specific objectives necessary for its attainment, so every specific objective was not fully strategized. Strategies demand more specificity than the specific objectives and involve numerous hard decisions which may have been postponed until managers returned to their organizations after training. Strategies cannot be systematically approached until comparatively late in the sessions; time may have run out. This dual factor may account for the underdevelopment of strategies.

ELEA #2's planning document offered the most complete connections between specific objectives and strategies. More of their objectives were fully strategized than those in other plans we reviewed. Moderate but highly acceptable progress was made in ELEA #1 and #4; ELEA #3 was not so attentive to strategies as the others.

None of the LEA's clearly delineated their priorities (criterion 7) in the documents made available to the research team. In ELEA #1, we could only presume priorities, since the manner of presentation differed for each suspected priority and was confusing.[40] EL #3 and #4 weighted their

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[40] In the AMA planning document for ELEA #1, priorities are typically presented:

PRIORITIES

Elementary

Priority Reading Strategies

1. Establish data base of student performance and ability
2. Lead teachers in elementary schools to improve reading......

PRIORITIES--SECONDARY

Specific Objectives--Prepare for continued education

Priority Strategies

1. Personnel needs (Subjective eval.)
    a) administrative
    b) teacher
2. Preparation for entry jobs.....

Reading this over, one could reasonably assume that ELEA #1 has continuing objectives by the assignment of points but did not specify the cutoff level for priority status. By scanning a list of continuing objectives with descending weighted averages the reader cannot learn whether three continuing objectives, four, or some other number have been termed priorities. In all cases a simple listing of issues identified as district priorities would have been clearest.

Action assignments (criterion 8) cover the creation of job descriptions for key personnel in the organization. Job descriptions sometimes include performance standards (criterion 9) and task completion dates (criterion 10), to be discussed later. Here we evaluate the definition of the position and a listing of responsibilities of that position. ELEA #3 was unable to comply with this training goal; ELEA #2 and ELEA #4 did some work on it; job descriptions were a particular strength of the ELEA #1 planning document.

Another area of minimal progress was criterion 9, standards of performance. While responsibilities (action assignments) were plainly listed throughout most planning documents, expected results (performance standards) were not. No direct connection linked responsibilities to results. Since only one Experimental SED has made substantial progress in this regard, the unimpressive achievement of the local level is unsurprising.

Efforts to specify task completion dates (criterion 10) for action assignments met similar success in the ELEA's. Many of the decisions made by trainees had firm deadlines attached to them. ELEA #2 and ELEA #4 apparently placed great importance on this criterion. ELEA #1 and ELEA #3, for whatever reasons, did not appear so concerned to establish completion dates for tasks assigned at Hamilton.

Criteria 11 and 12 were interpreted to suggest activities such as in-service training, planning guidelines, etc. We have already mentioned ELEA #2's presentation of current achievement information in their planning document. Both of these criteria are so broadly stated as to defy precise definition. For this reason, the research team has taken refuge in the "moderate" column for nearly all ELEA's. All produced reports and paper decisions which could be taken as supplementary planning efforts or the

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set reading as its elementary schools priority and career/ higher education as its secondary schools priority. But the disparity of form and content for the two levels as well as lack of clarity make our priority designation difficult.

assignment of responsibility to subordinate units. Using this same decision rule, since ELEA #3 did not insert as much information about these criteria in their planning document, a minimum rating was assigned to their supplementary planning efforts.

Evaluation (criterion 13) was another weak point in the AMA program in the LEA's. Like their ESED counterparts, the LEA's have not developed an adequate evaluative system based on the plan produced through AMA training. Some of the objectives suffer from overgeneralized evaluation strategies.[41] Others fail to list any means of evaluation at all.[42] Where specific indices do appear, a suitable testing program is strongly recommended. This is understandable given the traditional reliance of American education on this device; especially in assessing reading skills, testing had obvious utility.

The SED's made some progress, albeit minimal, in broadening their evaluation base beyond simple paper-and-pencil tests; the LEA's seem to have every written intention of following suit. Some acceptable examples of evaluation strategies were found among the ELEA #3 materials. Evaluation certainly concerns the ELEA's, for many objectives and strategies of evaluation appeared throughout the planning documents. In the Spring of 1972 the research team requested that the Experimental ELEA's forward to us their current plans and an up-to-date status report regarding progress on the plans produced during AMA training. Responses to that request are discussed in Chapter Six. As we have indicated, any meaningful evaluation of the effectiveness of AMA training must be based on an evaluation which looks at attitudes and actions over time and their effect on organizational output.

Section 2: Attitudes

After considering whether LEA's accomplished the thirteen training goals of the AMA, we must look at how they view their accomplishments. Attitudes expressed about various planning activities at the Hamilton, New York training site foreshadow the future development of the team planning process after participants returned to their organization.

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[41] An example can be drawn from ELEA #2: "Identify seventh grade students reading below sixth grade level on standard achievement test."

[42] An example can be drawn from ELEA #4: "By June 1972, 7th and 10th grade students will demonstrate the ability to accept a new school environment as measured by appropriate means."

Attitudinal data for this section is divided into four basic areas:

A. Development of Organizational Mission and Objectives

B. Mobilization of Organizational Planning

C. Top Management Support for Planning

D. Credibility of the Planning Process

Data was gathered from participating LEA's through questionnaires alone. In displaying questionnaire data within each area, two comments will be provided:

1. Questionnaire Item: The statement in the questionnaire to which a response was given on a scale of (1) not at all to (7) very often.

2. Points of Time: For each item the time in which it was administered will be indicated (T1 = Fall 1970; T2 = Spring 1971; T3 = Fall 1971; and T4 = Spring 1972).

In most cases, training effects were determined on the basis of a T1-T4 comparison. The research team is most confident of these conclusions. However, due to recent additions of questionnaire items, it was sometimes necessary to assign effects after a T3-T4 comparison alone. While the absence of T1-T2 data counseled cautious interpretations, we are certain our decisions were valid. This is especially true where we obtained organizational documents to support other analysis. Furthermore, the T3-T4 comparisons also include Control LEA's which were not included in T1-T2. The presence of such multiple measures provides double coverage on many items. For these reasons, we felt justified in attributing positive effects, no effects, or negative effects on T3-T4 as well as T1-T4 comparisons.

Only the Experimental LEA's responded in T1 and T2. In T3 and T4, two Control LEA's were added to the analysis. Therefore, most T3-T4 comparisons include Experimental and Control LEA's. The single exception to this occurs on items which were designed to measure attitudes toward AMA's role in the training. Since questions about the AMA could not be asked of organizations which did not participate in the program, the Control LEA's were not asked to respond to them.

A. Development of Organizational Mission and Objectives

Seven perspectives on the question of defining organizational missions and objectives are provided by seven questionnaire items:

1. The goals of this organization are articulated

   Points of Time: T1, T2, T3, T4

2. Our goals are realistic and attainable with our best efforts.

   Points of Time: T1, T2, T3, T4

3. The top priority objectives for state education are clear to me.

   Points of Time: T3, T4

4. I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.

   Points of Time: T3, T4

   LEA's: EL1, EL2, EL3, EL4
   As this pertains specifically to AMA training it was not asked in the Control LEA's (CL1 and CL2)

5. As I see it, the operational priorities of the objectives developed during AMA training are clear.

   Points of Time: T3, T4

   LEA's: EL1, EL2, EL3, EL4
   As this pertains specifically to AMA training it was not asked in the Control LEA's (CL1 and CL2)

6. The kinds of things I am doing will make a long term contribution to education.

   Points of Time: T1, T2, T3, T4

7. As I see it, my organization is moving in the right direction.

   Points of Time: T3, T4

Item 1 : The Goals of the Organization are articulated.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.250	1.174	25	4.920	1.552	32	6.031	0.932	31	5.806	1.077
Experimental LEA #2	38	5.105	1.180	26	4.269	1.313	31	5.548	1.233	32	5.437	0.948
Experimental LEA #3	33	5.363	1.112	17	4.705	0.985	24	5.333	0.816	23	5.173	1.072
Experimental LEA #4	27	4.666	1.330	23	4.652	1.721	29	5.034	1.426	27	4.851	1.610
Control LEA #1							30	5.166	1.391	20	5.450	0.944
Control LEA #2							36	5.083	1.401	33	5.000	1.322
Total	127			91			185			167		

Two-Way Analysis of Variance	T_1 & T_2			T_2 & T_3		T_3 & T_4			T_1 & T_4	
		F	Signif.	F	Signif.		F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	5.762	.05	5.919	.05		0.799	NS	5.189	.05
Experimental LEA #2	Row	2.681	NS	1.847	NS		5.148	.05	1.733	NS
Experimental LEA #3 W/	Col.	1.537	NS	3.322	NS		0.448	NS	0.000	NS
Experimental LEA #4	Row	1.916	NS	0.405	NS		1.476	NS	4.174	.05
Experimental LEA #1 W/						Col.	0.018	NS		
Control LEA #1						Row	8.202	.01		
Experimental LEA #2 W/						Col.	0.150	NS		
Control LEA #1						Row	0.689	NS		
Experimental LEA #3 W/						Col.	0.278	NS		
Control LEA #2						Row	0.849	NS		
Experimental LEA #4 W/						Col.	0.265	NS		
Control LEA #2						Row	0.145	NS		

Item 2 : Our goals are realistic and attainable with our best efforts.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.392	0.831	38	5.289	1.183	32	6.218	0.750	31	6.032	0.795
Experimental LEA #2	25	4.920	1.605	26	4.769	1.242	31	5.935	0.928	32	5.625	1.099
Experimental LEA #3	33	4.878	1.386	17	4.823	1.333	24	5.666	0.816	23	5.434	0.992
Experimental LEA #4	26	4.846	1.317	23	4.565	2.128	29	5.241	1.745	27	5.074	1.567
Control LEA #1							30	6.200	0.761	20	5.850	0.988
Control LEA #2							36	5.638	1.198	33	5.333	1.020
Total	112			104			182			166		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	4.640	.05	32.740	.001	2.376	NS	7.454	.01
Experimental LEA #2	Row	0.303	NS	1.015	NS	4.588	.05	2.044	NS
Experimental LEA #3 W/	Col.	0.269	NS	5.032	.05	0.540	NS	2.270	NS
Experimental LEA #4	Row	0.201	NS	1.018	NS	2.097	NS	0.571	NS
Experimental LEA #1 W/	Col.					2.976	NS		
Control LEA #1	Row					0.417	NS		
Experimental LEA #2 W/	Col.					3.280	NS		
Control LEA #1	Row					1.801	NS		
Experimental LEA #3 W/	Col.					1.872	NS		
Control LEA #2	Row					0.108	NS		
Experimental LEA #4 W/	Col.					0.896	NS		
Control LEA #2	Row					1.729	NS		

Item 3 The top priority objectives for state education are clear to me.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	5.250	1.218	31	5.161	1.128
Experimental LEA #2	31	4.870	1.384	32	5.093	1.422
Experimental LEA #3	24	4.416	1.138	23	4.000	1.167
Experimental LEA #4	29	4.517	1.682	27	4.444	1.908
Control LEA #1	30	5.200	1.156	20	5.300	1.031
Control LEA #2	36	4.111	1.389	33	4.363	1.318
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	0.084	NS
Experimental LEA#2	Row	0.937	NS
Experimental LEA#3W/	Col.	0.647	NS
Experimental LEA#4	Row	0.803	NS
Experimental LEA#1W/	Col.	0.000	NS
Control LEA #1	Row	0.040	NS
Experimental LEA#2W/	Col.	0.431	NS
Control LEA #1	Row	1.186	NS
Experimental LEA#3W/	Col.	0.115	NS
Control LEA #2	Row	0.014	NS
Experimental LEA#4W/	Col.	0.101	NS
Control LEA #2	Row	0.745	NS

Item 4 I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	5.843	0.919	31	5.806	1.077
Experimental LEA #2	31	5.612	1.406	32	5.593	1.240
Experimental LEA #3	24	4.458	1.744	21	5.000	1.483
Experimental LEA #4	29	4.931	1.579	26	5.076	1.622
Total	116			111		

Two-Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1 W/ Experimental LEA#2	Col.	0.018	NS
	Row	1.123	NS
Experimental LEA#3 W/ Experimental LEA#4	Col.	1.120	NS
	Row	0.715	NS

Item 5 As I see it, the operational priorities of the objectives developed during AMA training are clear.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	6.000	0.879	31	5.838	1.067
Experimental LEA #2	31	5.483	1.338	32	5.531	1.319
Experimental LEA #3	24	4.500	1.793	21	4.952	1.283
Experimental LEA #4	29	4.827	1.554	26	4.692	1.691
Total	116			111		

Two-Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1 W/ Experimental LEA#2	Col.	0.075	NS
	Row	3.927	.05
Experimental LEA#3 W/ Experimental LEA#4	Col.	0.241	NS
	Row	0.010	NS

Item 6 : The kinds of things I am doing will make a long term contribution to education.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.821	0.772	25	5.040	1.670	32	5.937	0.715	31	5.548	0.994
Experimental LEA #2	39	5.256	1.250	26	5.038	1.370	31	5.612	0.882	32	5.781	1.128
Experimental LEA #3	33	4.939	1.170	17	5.058	1.197	24	5.250	1.359	23	5.043	1.397
Experimental LEA #4	27	5.444	1.577	23	4.695	1.940	29	5.413	1.401	27	5.370	1.445
Control LEA #1							30	5.366	1.129	20	5.400	1.273
Control LEA #2							36	5.416	1.360	33	5.242	1.173
Total	127			91			185			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	4.298	.05	10.961	.001	0.431	NS	0.442	NS
Experimental LEA #2	Row	1.381	NS	0.538	NS	0.074	NS	0.769	NS
Experimental LEA #3 W/	Col.	1.045	NS	2.027	NS	0.202	NS	0.003	NS
Experimental LEA #4	Row	0.053	NS	0.097	NS	0.781	NS	2.411	NS
Experimental LEA #1 W/	Col.					0.829	NS		
Control LEA #1	Row					3.388	NS		
Experimental LEA #2 W/	Col.					0.231	NS		
Control LEA #1	Row					2.238	NS		
Experimental LEA #3 W/	Col.					0.583	NS		
Control LEA #2	Row					0.538	NS		
Experimental LEA #4 W/	Col.					0.202	NS		
Control LEA #2	Row					0.066	NS		

Item 7 : As I see it, my organization is moving in the right direction.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1							32	6.312	0.859	31	6.290	0.937
Experimental LEA #2							31	5.935	1.364	31	5.967	1.048
Experimental LEA #3							24	6.125	0.850	23	5.695	0.973
Experimental LEA #4							29	5.758	0.950	27	5.222	1.423
Control LEA #1							30	6.033	1.066	20	6.150	0.875
Control LEA #2							36	5.777	1.436	33	5.696	1.131
Total							185			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.					0.000	NS		
Experimental LEA #2	Row					3.349	NS		
Experimental LEA #3 W/	Col.					5.104	NS		
Experimental LEA #4	Row					3.859	NS		
Experimental LEA #1 W/	Col.					0.068	NS		
Control LEA #1	Row					1.349	NS		
Experimental LEA #2 W/	Col.					0.118	NS		
Control LEA #1	Row					0.420	NS		
Experimental LEA #3 W/	Col.					1.350	NS		
Control LEA #2	Row					0.620	NS		
Experimental LEA #4 W/	Col.					1.860	NS		
Control LEA #2	Row					1.191	NS		

Item #1: Fall 1970 to Spring 1971

Item #1, The goals of this organization are articulated, is a comparison of Experimental LEA #1 (EL1) with Experimental LEA #2 (EL2) and Experimental LEA #3 (EL3) with Experimental LEA #4 (EL4). Absence of any Control LEA prompts caution about ascribing training effects to the AMA program. But an analysis of the data reveals that the goals of all four Experimental LEA's were less articulated in Spring 1971, after training had ended, than they had been in Fall 1970, before training had begun. In neither comparison was there any difference between the LEA's but EL2 did decline much more sharply than the rest. And since this decline was significant, negative training effects can be attributed to EL2. The losses in goal articulation in the other LEA's were insufficient to warrant similar action.

Item #1: Spring 1971 to Fall 1971

Except for EL2, the AMA program had no effect on the LEA's between Spring 1971 and Fall 1971. In contrast to the preceding period, all four groups increased the degree to which they felt their goals were articulated. These increases were similar enough not to produce any differences; no LEA saw the goals as significantly more articulated than other LEAs. However, the rise in perceived goal clarity was a major change for EL2. So instead of being adversely affected by training as was true in T1-T2, EL2's level of goal articulation was raised by the AMA program.

Item #1: Fall 1971 to Spring 1972

The addition of Control LEA #1 (CL1) and Control LEA #2 (CL2) to each set of comparisons will strengthen our appraisal of results of the AMA change strategy. Reviewing events in the LEA's between Fall 1971 and Spring 1972, we cannot attribute any effects of training. EL1 held their advantage over EL2 and also sensed that their goals were more articulated than their corresponding Control LEA (CL1). Other than that, no difference between, or changes among, the LEA's can be ascribed to their Hamilton experiences.

Item #1: Fall 1970 to Spring 1972

Our overall assessment considers change on a Fall 1970 to Spring 1972 basis. Studying these time frames, it is evident that EL3 perceives a higher level of articulation for their goals than EL4 perceives for theirs; although EL3's goals are less articulated after training than before, while EL4's are more articulated. The absence of any definite shifts over time though preclude any assignment of effects to either group. Both EL1 and EL2 enhanced goal articulation since training ended; yet EL2's advance was considerably less than EL1's. For that reason, we conclude that AMA was responsible for positive training effects in EL1.

Item #2: Fall 1970 to Spring 1971

The degree to which The goals are realistic and attainable with our best efforts is Item #2 in this section. Here we contrast the two Experimental LEA's in each state directly, without a control group. On account of this, our analysis will be less straightforward during this period than it might have been with a control group. One clear development is that all LEA's perceived their goals to be less realistic and attainable after training than before. The extent to which AMA can be held accountable for this decline, however, is limited to EL1 and EL2 which both experienced similar significant reductions. Neither EL3 nor EL4 diminished their evaluations enough to make any decisions on training effects on those organizations.

Item #2: Spring 1971 to Fall 1971

The situation in T2-T3 was altogether different. AMA could be credited with positive effects in the four Experimental LEA's. Not only did each consider its goals significantly more realistic in the Fall than in the previous Spring but also more realistic than in the Fall of 1970, before training began. These T2-T3 enlargements in felt goal feasibility more than made up for the decreases reported in the immediate post-training period. Of the four groups, EL1 registered the best feeling, although EL2 experienced most growth over time.

Item #2: Fall 1971 to Spring 1972

The T1-T2 pattern reasserted itself during this time as the LEA's again dropped in their estimation of their goals. However, these losses were not significant and cannot be attributed to any effects of AMA training. This no-effects conclusion is reinforced by additional comparisons with the Control LEA's. EL1 and EL2 were not different from, nor did they change relative to, CL1; the same was true for EL3 and EL4 as against CL2. There were no effects due to implementation of the AMA program in any LEA's.

Item #2: Fall 1970 to Spring 1972

Only in EL1 and EL2 could any effects be linked to the training experience. Based on a Fall 1970 to Spring 1972 evaluation, we held that training helped shape EL1 and EL2's goals, making them more realistic and attainable. While EL3 and EL4 also increased over this period, modifications in those two organizations were insignificant; nothing in their cases can be credited to, or blamed upon, AMA.

Item #3: Fall 1971 to Spring 1972

Item #3, The top priority objectives for state education are clear to me, is another aspect of the development of organizational mission and objectives. Reactions to this statement were invited from the Experimental LEA's and the Control LEA's covering the period Fall 1971 to Spring 1972. EL1, EL2, EL3, and EL4 showed diminished awareness of state educational priorities while CL1 and CL2 intensified their awareness. Nevertheless all these changes were not enough to register significant difference among the LEA's. No training effects can be attributed to AMA on the clarity of top state educational objectives to local school officials in either State.

Item #4: Fall 1971 to Spring 1972

I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education, Item #4, could only address the LEA's which had undergone AMA training; no control group was possible. It was also restricted to a T3-T4 comparison. Increases and decreases in felt applicability of objectives to needs were uniform within each State. There was a slight extension of relevance in EL3 and EL4 and a small reduction in EL1 and EL2. Neither was substantial; each was about the same in the Spring as it had been the previous Fall. Hence no effects were present in the LEA's as a result of the program.

Item #5: Fall 1971 to Spring 1972

Item #5 asks respondents to indicate their understanding of priorities among their own organizational objectives: As I see it, the operational priorities of the objectives developed during AMA training are clear. EL1's reaction was then matched with EL2; and what EL3 thought about this variable was compared to EL4. An analysis of the results of these comparisons revealed that

(1) EL1 and EL4 encountered a net loss of clarity while EL2 and EL3 reported a minimal gain; (2) a significantly lower degree of priority understanding appeared in EL2 than in EL1. In spite of these developments, none constituted an effect of training. The AMA planning process did not clarify LEA priorities.

Item #6: Fall 1970 to Spring 1971

Item #6 asks whether organizations feel The kinds of things I am doing will make a long term contribution to education as a consequence of AMA training. We can make only weak causal connections between training and subsequent effects due to the absence of Control LEA's during this, and the next, time period. Looking at the LEA's pre- and post-training, we found statistically significant change in EL1 and EL2; this change was a downward movement in perceived importance of their activities. EL3 and EL4 also minimized the importance of their work but not significantly. While all four Experimental LEA's believed what they were doing to be less worthwhile after training than before; only EL1 and EL2's decline was substantial. We can attribute training effects only to EL1 and EL2, and these effects were negative.

Item #6: Spring 1971 to Fall 1971

No effects could be measured in EL3 and EL4 during the Spring 1971 to Fall 1971 period. These Experimental LEA's enhanced their felt importance but not enough to produce significant change. EL1 and EL2 showed sizable improvement in this variable over time; the AMA program can be credited with a positive effect.

Item #6: Fall 1971 to Spring 1972

The addition of the Control Group for each paired Experimental LEA makes our conclusions more valid. It also provides multiple measurements for our findings of no effects of AMA training T3-T4. None of the Experimental groups differed from their Control group; neither was EL1 different from EL2 or EL3 different from EL4. Furthermore, none of the LEA's changed significantly between Fall 1971 and Spring 1972. As a result, no training effects were shown on this variable in this period.

Item #6: Fall 1970 to Spring 1972

Our lengthiest temporal comparison merely reinforces this view. Between Fall 1970 and Spring 1971 the Experimental

LEA's were relatively stable in their concept of how much they were contributing to education. EL1 and EL4 declined somewhat while EL2 and EL3 each enhanced their positive feelings about their work. In no case however, were these changes very impressive, one way or the other, nor did any apparent differences arise between the States. Based on this data, the research team discerns no effects of AMA training.

Item #7: Fall 1971 to Spring 1972

Item #7, As I see it, my organization is moving in the right direction, is the last variable in this section. In general, the experimental LEA's reacted to it similarly over time; all but one felt less agreement with their organizational direction in the Spring of 1972 than in the Fall of 1971. The exception, EL2, showed miniscule improvement. Neither decreases nor increases were significant. Bringing the Control groups into the analysis does not modify this trend. In comparison with CL1, EL1 and EL2 did not change greatly T3-T4, nor were they very different. The same relationship and result characterizes EL3 and EL4 with CL2. It follows that no training effects can be assigned to the AMA program in this area.

DATA SUMMARY
Development of Organizational
Mission & Objectives

Fall, 1970 - Spring,1972

Item	Type of Data QUESTIONNAIRE	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
1	The goals of this organization are articulated.	EL1	EL2,EL3, EL4	
2	Our goals are realistic and attainable with our best efforts.	EL1,EL2	EL3,EL4	
3	The top priority objectives for state education are clear to me.		EL1,EL2, EL3,EL4	
4	I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.		EL1,EL2, EL3,EL4	
5	As I see it, the organizational priorities of the objectives developed during AMA training are clear.		EL1,EL2, EL3,EL4	

6	The kinds of things I am doing will make a long term contribution to education.	EL1,EL2, EL3,EL4
7	As I see it, my organization is moving in the right direction.	EL1,EL2, EL3,EL4

Three instances in the data indicated positive effects attributable to AMA training. EL1 experienced two such positive effects, an increase in the extent to which people saw goals as being articulated and an increase in the degree to which the organization's goals were thought realistic. EL2 also experienced an increase in the realism attributed to its goals.

In all other instances (25), however, there were no significant effects (positive or negative) on the attitudes of the personnel in the EL's as a result of training. Attitudes about priorities, objectives developed during AMA training, and the directions of their organizations remained static over the period of this study. EL3 & 4 also failed to report any clarification of their goals.

As a general rule, the data indicates higher mean scores for EL's 1 & 2 than for EL's 3 & 4.

The addition of the Control LEA's in the T3-T4 comparisons indicates no statistically important difference on any of the five items in which they appear. The one exception to this is a significant row variance in Item #1 between EL1 and Control 1. EL1 was statistically different from the Control; here it had much higher mean scores than those of the Control 1.

In summary, these items indicate that the AMA training seemed to have no overall effect (with the three exceptions of positive effects noted) on personnel attitudes in the EL's concerning organizational Mission and Objectives.

B. Mobilization of Organizational Planning

Here we assess attitudes toward steps that must be taken to "gear up" for the planning process. Clarity of organizational policy from which plans can grow, existence of performance standards, assistance provided by a planning unit, and evaluation methods used to measure the quality of what has been done are issues to be addressed in this section. The questionnaire items used were:

1. My organization's policy statements are clear.

   Points of Time: T1, T2, T3, T4

2. My organization's performance standards are understood.

   Points of Time: T1, T2, T3, T4

3. Good ways are used to let me know how I can improve my performance.

   Points of Time: T1, T2, T3, T4

4. I understand what results must be produced to achieve the stated objectives of this organization.

   Points of Time: T3, T4

5. The planning unit has been helpful to me.

   Points of Time: T3, T4

6. I have good ways for knowing how good our results are.

   Points of Time: T1, T2, T3, T4

7. My organization has reliable ways for knowing how well it is attaining its objectives.

   Points of Time: T3, T4

8. I think that the objectives developed during AMA training are clearly stated with regard to results expected.

   Points of Time: T3, T4

   LEA's: EL1, EL2, EL3, EL4
   As this pertains specifically to AMA training it was not asked in the Control LEA's (CL1 and CL2)

Item 1 : My organization's policy statements are clear.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.464	1.104	25	4.760	1.738	32	6.437	0.840	31	6.225	0.668
Experimental LEA #2	39	5.487	1.393	26	4.538	1.580	31	5.064	1.504	32	5.437	1.242
Experimental LEA #3	33	5.121	1.340	17	4.823	1.467	24	5.666	0.868	23	5.304	0.926
Experimental LEA #4	27	4.814	1.442	23	4.782	1.782	29	5.137	0.990	27	4.851	1.511
Control LEA #1							30	5.366	1.351	20	5.350	1.182
Control LEA #2							36	4.722	1.523	33	4.757	1.369
Total	127			91			185			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	9.216	.01	16.738	.001	0.165	NS	3.043	NS
Experimental LEA #2	Row	0.133	NS	8.764	.01	29.705	.001	3.518	NS
Experimental LEA #3 W/	Col.	0.184	NS	4.802	.05	2.158	NS	0.183	NS
Experimental LEA #4	Row	0.316	NS	1.084	NS	4.944	.05	2.174	NS
Experimental LEA #1 W/ Control LEA #1	Col.					0.337	NS		
	Row					24.499	.001		
Experimental LEA #2 W/ Control LEA #1	Col.					0.482	NS		
	Row					0.175	NS		
Experimental LEA #3 W/ Control LEA #2	Col.					0.471	NS		
	Row					9.797	.01		
Experimental LEA #4 W/ Control LEA #2	Col.					0.257	NS		
	Row					1.064	NS		

Item 2 : My organization's performance standards are understood.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.464	0.881	25	4.360	1.776	32	5.281	0.991	30	5.133	1.008
Experimental LEA #2	39	5.256	1.312	26	4.192	1.386	31	4.580	1.478	31	4.387	1.174
Experimental LEA #3	33	5.181	1.210	17	4.470	1.419	24	4.541	0.931	23	4.521	1.038
Experimental LEA #4	27	4.740	1.677	23	4.521	1.903	29	4.275	1.810	27	3.925	1.639
Control LEA #1							30	4.800	1.471	20	4.650	1.268
Control LEA #2							36	4.194	1.214	32	4.031	1.307
Total	127			91			185			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3			T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.		F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	18.238	.001	6.045	.05		0.649	NS	8.950	.01
Experimental LEA #2	Row	0.547	NS	2.657	NS		11.662	.001	5.655	.05
Experimental LEA #3 W/	Col.	2.110	NS	0.068	NS		0.420	NS	7.298	.01
Experimental LEA #4	Row	0.370	NS	0.102	NS		2.284	NS	3.607	NS
Experimental LEA #1 W/						Col.	0.422	NS		
Control LEA #1						Row	4.431	.05		
Experimental LEA #2 W/						Col.	0.430	NS		
Control LEA #1						Row	0.848	NS		
Experimental LEA #3 W/						Col.	0.174	NS		
Control LEA #2						Row	3.643	NS		
Experimental LEA #4 W/						Col.	0.909	NS		
Control LEA #2						Row	0.001	NS		

Item 3 : Good ways are used to let me know how I can improve my performance.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	4.714	1.301	25	4.477	1.554	32	5.625	0.975	31	5.387	1.022
Experimental LEA #2	39	4.769	1.404	26	4.269	1.115	31	4.967	1.448	32	5.093	1.058
Experimental LEA #3	33	4.242	1.323	17	4.235	1.521	24	5.125	0.991	23	4.651	1.612
Experimental LEA #4	27	4.148	1.875	23	4.304	1.987	29	4.724	1.532	27	4.148	1.725
Control LEA #1							30	5.066	1.436	20	5.500	1.277
Control LEA #2							36	4.750	1.610	33	4.696	1.424
Total	127			91			185			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3			T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.		F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	5.731	.05	23.036	.001		0.075	NS	5.375	.01
Experimental LEA #2	Row	0.408	NS	0.642	NS		5.474	.05	0.307	NS
Experimental LEA #3 W/	Col.	0.046	NS	4.027	.05		3.116	NS	0.426	NS
Experimental LEA #4	Row	0.001	NS	0.258	NS		2.319	NS	0.909	NS
Experimental LEA #1 W/						Col.	0.186	NS		
Control LEA #1						Row	0.970	NS		
Experimental LEA #2 W/						Col.	1.231	NS		
Control LEA #1						Row	1.004	NS		
Experimental LEA #3 W/						Col.	0.917	NS		
Control LEA #2						Row	0.361	NS		
Experimental LEA #4 W/						Col.	1.235	NS		
Control LEA #2						Row	1.031	NS		

Item 4 I understand what results must be produced to achieve the stated objectives of this organization.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	5.875	0.707	31	5.741	0.855
Experimental LEA #2	31	5.774	1.023	32	5.687	1.176
Experimental LEA #3	24	5.458	0.931	23	5.043	1.106
Experimental LEA #4	29	5.517	1.242	27	5.185	1.618
Control LEA #1	30	5.566	1.006	20	5.200	1.321
Control LEA #2	36	5.166	1.183	33	4.818	1.309
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	0.415	NS
Experimental LEA#2	Row	0.207	NS
Experimental LEA#3W/	Col.	2.227	NS
Experimental LEA#4	Row	0.160	NS
Experimental LEA#1W/	Col.	1.853	NS
Control LEA #1	Row	5.366	.05
Experimental LEA#2W/	Col.	1.114	NS
Control LEA #1	Row	2.620	NS
Experimental LEA#3W/	Col.	3.021	NS
Control LEA #2	Row	1.385	NS
Experimental LEA#4W/	Col.	0.806	NS
Control LEA #2	Row	0.084	NS

Item 5 The planning unit has been helpful to me.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	5.843	0.954	31	5.709	1.006
Experimental LEA #2	31	5.516	1.338	32	5.218	1.263
Experimental LEA #3	24	5.166	1.659	22	5.090	1.269
Experimental LEA #4	29	5.310	1.583	25	4.760	1.535
Control LEA #1	30	5.066	1.760	20	5.500	1.357
Control LEA #2	36	4.222	2.099	27	3.962	1.604
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	1.104	NS
Experimental LEA#2	Row	3.977	.05
Experimental LEA#3W/	Col.	1.039	NS
Experimental LEA#4	Row	0.093	NS
Experimental LEA#1W/	Col.	0.362	NS
Control LEA #1	Row	3.939	.05
Experimental LEA#2W/	Col.	0.060	NS
Control LEA #1	Row	0.092	NS
Experimental LEA#3W/	Col.	0.243	NS
Control LEA #2	Row	9.323	.01
Experimental LEA#4W/	Col.	1.528	NS
Control LEA #2	Row	8.285	.01

Item 6 : I have good ways for knowing how good our results are.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	4.857	1.044	25	4.480	1.475	32	5.531	0.983	31	5.193	0.980
Experimental LEA #2	39	4.641	1.307	26	4.423	1.064	31	4.709	1.295	32	4.750	0.983
Experimental LEA #3	33	4.696	1.045	17	4.647	0.861	24	5.041	0.806	23	4.782	0.951
Experimental LEA #4	27	4.851	1.616	23	4.782	1.881	29	4.896	1.371	27	4.629	1.620
Control LEA #1							30	4.533	1.166	20	5.000	1.123
Control LEA #2							36	4.583	1.155	33	4.454	1.063
Total	127			91			185			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	1.650	NS	8.616	.01	0.610	NS	1.306	NS
Experimental LEA #2	Row	0.347	NS	3.715	NS	11.044	.001	2.865	NS
Experimental LEA #3 W/	Col.	0.041	NS	0.814	NS	1.121	NS	0.070	NS
Experimental LEA #4	Row	0.248	NS	0.000	NS	0.360	NS	0.000	NS
Experimental LEA #1 W/ Control LEA #1	Col.					0.100	NS		
	Row					8.617	.01		
Experimental LEA #2 W/ Control LEA #1	Col.					1.326	NS		
	Row					0.027	NS		
Experimental LEA #3 W/ Control LEA #2	Col.					0.998	NS		
	Row					4.105	.05		
Experimental LEA #4 W/ Control LEA #2	Col.					0.716	NS		
	Row					1.091	NS		

Item 7 My organization has reliable ways for knowing how well it is attaining its objectives.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	5.531	1.077	31	5.064	0.963
Experimental LEA #2	31	4.870	1.231	32	4.812	1.029
Experimental LEA #3	24	5.333	1.007	23	5.000	0.953
Experimental LEA #4	29	4.344	1.541	27	3.962	1.556
Control LEA #1	30	4.566	1.430	20	4.750	1.446
Control LEA #2	36	4.444	1.252	33	4.242	1.369
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	1.863	NS
Experimental LEA#2	Row	5.621	.05
Experimental LEA#3W/	Col.	1.870	NS
Experimental LEA#4	Row	14.999	.001
Experimental LEA#1W/	Col.	0.365	NS
Control LEA #1	Row	7.452	.01
Experimental LEA#2W/	Col.	0.065	NS
Control LEA #1	Row	0.562	NS
Experimental LEA#3W/	Col.	1.415	NS
Control LEA #2	Row	13.392	.001
Experimental LEA#4W/	Col.	1.302	NS
Control LEA #2	Row	0.548	NS

Item 8 I think that the objectives developed during AMA training are clearly stated with regard to results expected.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	6.187	0.820	31	5.903	1.075
Experimental LEA #2	31	5.709	1.442	32	5.593	1.316
Experimental LEA #3	24	4.916	2.083	22	5.227	1.540
Experimental LEA #4	29	4.793	1.820	26	4.692	1.805
Total	116			111		

Two-Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1 W/ Experimental LEA#2	Col.	0.896	NS
	Row	3.467	NS
Experimental LEA#3 W/ Experimental LEA#4	Col.	0.082	NS
	Row	0.811	NS

Item #1: Fall 1970 to Spring 1971

Item #1, *My organization's policy statements are clear*, is the initial variable in our analysis of the mobilization of organizational planning. Each of the Experimental LEA's shows a general downward trend. The degree to which organization members considered their policy statements clear diminished over time; clarity was greater before training than afterward. In EL1 and EL2 this reduction was sizable; in the others not nearly so great. Thus the AMA can be held responsible for this negative training effect in EL1 and EL2. The lack of a control group again made judgments more tentative than they might have been. Our conclusion would have been strengthened had we been able to compare changes in the Experimental LEA's with comparable Control LEA's which did not receive any training. Yet the declines in EL1 and EL2 are more than adequately severe to warrant assignment of negative impact without the addition of Control groups.

Item #1: Spring 1971 to Fall 1971

The negative effects determined T1-T2 were reversed by subsequent developments T3-T4, at least in EL1. That organization felt considerably better about their policy pronouncements during this period, and this positive direction can be credited to the AMA. No major change was apparent for E2 since their increased average score was negated by a greater instability and breakdown of consensus (as evidenced by the increases in the SD column). Clarity also intensified in EL3 and EL4 to significant levels; and this was attributed to the AMA program. Therefore, positive training effects occurred in EL1, EL3, and EL4.

Item #1: Fall 1971 to Spring 1972

Substantial differences opened between several Experimental LEA's between Fall 1971 and Spring 1972. EL1 believed its statements more understandable than EL2; EL3 enjoyed a similar advantage over EL4. When we brought the Control LEA's into the analysis, EL1 and EL3 maintained their superiority. EL surpassed CL1 and EL3 bested CL2 in perceived clarity. Despite this, we found it impossible to attach any effects to the training that all received. The addition of the Control groups buttressed our argument in this regard.

Item #1: Fall 1970 to Spring 1972

No investigation of training effects would be complete without a direct comparison between pre- and post-training statement clarity. Such a study was made between the Fall of 1970 and the Spring of 1972 and revealed that training had no effect on any of the Experimental LEA's. Each felt similarly clear about their policy statements a year after training as they had before training.

Item #2: Fall 1970 to Spring 1971

Item #2 is My organization's performance standards are understood. Each of the LEA's who had enrolled in AMA training were asked to respond to this statement before training and again immediately afterward. Their answers recalled that following their Hamilton experience they were more confused about standards to assess performance. The reduced comprehension was relatively minor in EL3, EL4 but not in EL1 and EL2, where the decrease were significant. For that reason we conclude that what happened in EL1 and EL2 was due to the AMA process and represents a negative effect of training.

Item #2: Spring 1971 to Fall 1971

Positive training effects were reported during 1971. Both EL1 and EL2 recouped a sizable portion of their earlier losses. Their joint comeback was substantiated and can be credited to AMA. EL1's reverse was especially impressive since their rising average score (as evidenced by the $\bar{X}$ column) was accompanied by a falling standard deviation (as evidenced by the SD column) which meant less diversity of opinion and greater consensus about this largely favorable effect of training. The same cannot be said for EL3 and EL4; no major changes or differences occurred there.

Item #2: Fall 1971 to Spring 1972

The Experimental LEA's all indicated diminishing understanding of performance standards T3-T4; although these reductions were not significant enough to ascribe any training effect. Another measurement was available here due to the presence of Control groups for each pair of Experimental groups. Their addition to the evaluation did not change the original finding of no training effects. Even when matched with an appropriate control, none of the LEA's indicated major changes. Our no effects judgment was thus reinforced.

Item #2: Fall 1970 to Spring 1972

The most powerful test of training effects is to look at how well performance standards were understood in the Fall of 1970 and then to compare these findings with those gathered in the Spring of 1972. Such a longitudinal study allowed us to differentiate between training effects which had some permanence and those which were transitory. Our audit indicated negative training effects in EL2, EL3 and EL4, and no effects in EL1. The first three organizations endured substantial declines in their understanding of performance standards, while understanding in EL1 remained stable over the four periods.

Item #3: Fall 1970 to Spring 1971

Item #3, Good ways are used to let me know how I can improve my performance, was asked of the four Experimental LEA's in Fall 1970 and Spring 1971. Lacking a Control group for comparison purposes, we must exercise caution in our interpretation but assignment of effects were still possible. In fact, effects were assigned in the cases of EL1 and EL2. Both organizations felt substantially worse about performance-related communication after training than before, a negative impact of training. The other organizations, EL3 and EL4, maintained their pre-training opinions through the immediate post-training period.

Item #3: Spring 1971 to Fall 1971

Positive training effects occurred in the LEA's during the Spring to Fall 1971 period. EL1/EL2 and EL3/EL4 all registered considerable increases in their attitudes toward means of assisting performance. It follows that AMA can be credited with positively affecting this variable.

Item #3: Fall 1971 to Spring 1972

Expressed feelings about ways to improve performance stabilized T3-T4. This leveling off had two bases of proof: a comparison of one Experimental group with another (EL1 and EL2) and a comparison of Experimental groups with a Control group (EL1 and CL1). Both sets of calculations arrived at the same conclusion: no effects of training in any of the four LEA's who took the team planning process at Hamilton. None of them changed sufficiently over time to justify any other assignment of effects.

Item #3: Fall 1970 to Spring 1972

One of the advantages of a T1-T4 comparison is the ability to see how variables perform over the long term.

Whatever effects might be registered in interim periods, EL3 and EL4 show no effects of AMA training. EL3 raised its opinions of performance feedback while a slight decrease turned up in EL4. On the other hand, EL1 and EL2 made substantial gains and increased levels of consensus that good means were used to transmit performance data. For this reason AMA can be assigned a positive training effect in EL1 and EL2.

Item #4: Fall 1971 to Spring 1972

Item #4 is I understand what results must be produced to achieve the stated objectives of this organization. Comparisons were made between the Experimental groups and two Control groups. Weaker understanding of expected results was shown in every Experimental LEA between Fall 1971 and Spring 1972. In the case of EL1/CL1, persons in the Experimental group had significantly more understanding than their Control counterparts. But none of the Experimental LEA's modified their comprehension significantly over time. Results were as clear T4 as they had been T3. For this reason, no training effect could be ascribed to the AMA program.

Item #5: Fall 1971 to Spring 1972

Item #5, The planning unit has been helpful to me, seeks information on contributions made by the unit or individual assigned planning responsibilities in the LEA's. In comparing LEA's within the same State against each other (EL1 with EL2 and EL3 with EL4) we found that every planning unit met with declining appreciation of its work. These declines were not at significant levels, however, and no training effects can be determined. This appraisal is made more valid by comparing Experimental with Control groups not receiving training. In every case where differences were substantial, the Experimental LEA was helped more by its planning unit than the Control LEA was by theirs. There were no significant changes over time (represented by the Significance column), which accounts for the absence of training effects. Differences among the organizations were comparable during both periods.

Item #6: Fall 1970 to Spring 1971

The evaluation system used to measure the quality of LEA educational output was the subject of Item #6, I have good ways for knowing how good our results are. Despite the fact that all Experimental LEA's thought their evaluation methods after training were inferior to those used before training, their attitudes did not deteriorate so much as to make a major pre- post-training difference. In fact, declines were so slight that statistical analysis considers them insignificant. No differences existed between the Experimental groups during the T1-T2 transition. AMA training cannot be assigned any positive or negative effects for any of these organizations.

Item #6: Spring 1971 to Fall 1971

The across-the-board reductions which occurred during T1-T2 did not reoccur in 1971. All school districts which participated in the team planning process at Hamilton had higher opinion of their evaluation methods. As far as EL1 and EL2 are concerned, the rise was rather steep and could be the result of AMA training. Increases reported in the other Experimental LEA's were not training effects since the change over time was insignificant.

Item #6: Fall 1971 to Spring 1972

Here our confidence that instruments administered for this study are accurately measuring training effects is appreciably greater. For besides the direct Experimental group/Experimental group comparisons, we also examined data generated by Experimental group/Control group comparisons. Both kinds of comparisons reached approximately the same final judgment: no effects of training were evident between Fall 1971 and Spring 1972. Neither the Experimental LEA's nor their control counterparts showed significant increases or decreases to warrant attribution of training effects.

Item #6: Fall 1970 to Spring 1972

On an overall assessment, the AMA program cannot be credited with any training effects. Although EL1, EL2, and EL3 had a more favorable opinion of their ways for assessing how good their results were in the Spring of 1972 than they had before training, in Fall 1970 this growth was too inconsequential to come from training. EL4 met with less success; persons in their organization declined in their evaluation methods over the 18-month evaluation program. Here again, change was slight and thus not a training effect.

Item #7: Fall 1971 to Spring 1972

Item #7, My organization has reliable ways for knowing how well it is attaining its objectives, also attempts to measure attitudes toward the evaluation system. It was applied to the four Experimental LEA's and two Control LEA's between Fall 1971 and Spring 1972. Analysis reveals that none of the differences between T3-T4 were the result of training. While more reliable ways for evaluating objective attainment are present in EL1 than in EL2, in EL3 than in EL4, in EL1 than in CL1, and in EL3 than in CL2, no difference is large enough to indicate corresponding changes over time in any of these organizations. Changes between T3-T4 were the key test of training effects since simple differences between LEA's can be the same before and after training. However, since no significant changes occurred, no training effects can be shown. The AMA program had no measurable impact on this aspect of local educational evaluation.

Item #8: Fall 1971 to Spring 1972

As a statement relevant only to those organizations involved in the AMA training program, Item #8, I think that the objectives developed during AMA training are clearly stated with regard to results expected, was posed only to the Experimental LEA's. Not having an untrained Control group with which to compare results complicated analysis. What we found was that there were no differences between the Experimental organizations or within any organizations over time. Each had the same feeling about objective clarity in the Spring of 1972 as they had in the Fall of 1971.

DATA SUMMARY

Mobilization of
Organizational Planning

Fall, 1970 - Spring, 1972

Item	Type of Data QUESTIONNAIRE	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
1	My organization's policy statements are clear.		EL1,EL2 EL3,EL4	
2	My organization's performance standards are clear.		EL1	EL2, EL3,EL4
3	Good ways are used to let me know how I can improve my performance.	EL1,EL2	EL3,EL4	
4	I understand what results must be produced to achieve the stated objectives of this organization.		EL1,EL2, EL3,EL4	
5	The planning unit has been helpful to me.		EL1,EL2, EL3,EL4	
6	I have good ways for knowing how good our results are.		EL1,EL2, EL3,EL4	
7	My organization has reliable ways for knowing how well it is achieving its objectives.		EL1,EL2, EL3,EL4	
8	I think that the objectives developed during AMA training are clearly stated with regard to results expected.		EL1,EL2, EL3,EL4	

There were two instances of positive and three of negative effects related to AMA training in this data about the implementation of the planning process. In twenty-seven instances, no effects emerged.

EL1 and EL2 both showed positive effects of training on Item #3. There were significant improvements in both EL's in the amount of feedback to staff from superiors or supervisors.

At the same time, negative training effects appear in EL2, 3 and 4 about performance standards. This is not surprising as it follows a pattern in the SED's and reflects the limited treatment of performance standards in the plans produced during AMA training.

The rest of the data in this section follows the pattern established in the previous section. The majority of items indicate no effects, attitudes remaining unchanged over the course of this evaluation.

A few statistically significant changes do occur when the EL's are compared with the CL's. In all cases, however, these differences appear as row variances and indicate only that a statistical difference exists between the agencies being compared. Although we must carefully interpret all comparisons involving the Control LEA's because we have no pre-training data, the absence of significant differences over time between the EL's and the CL's supports the overall conclusion that with only two exceptions, no positive effect of training is shown on these items.

C. Top Management Support for Planning

Crucial to the AMA's training design was that top management support the planning process. The following six items were designed to obtain the perceptions of organizational participants on how firmly the process had been supported and how that support may have changed over time.

1. My manager makes it clear that he is committed to the success of our projects.

   Points of Time: T1, T2, T3, T4

2. My manager has expressed the belief that the AMA's training program has been helpful.

   Points of Time: T1, T2, T3, T4

   LEA's: EL1, EL2, EL3, EL4
   As this pertains specifically to AMA training it was not asked in the Control LEA's (CL1 and CL2)

3. My manager understands planning theory and is able to put it into practice.

   Points of Time: T3, T4

4. I believe my organization gives me adequate training to do my work effectively.

   Points of Time: T3, T4

5. I feel good about my manager's ability to plan.

   Points of Time: T3, T4

6. My manager provides me with adequate support to perform my job.

   Points of Time: T3, T4

Item 1 : My manager makes it clear that he is committed to the success of our projects.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	6.351	0.731	25	5.160	1.675	32	6.531	0.567	31	6.548	0.623
Experimental LEA #2	39	5.820	1.072	26	5.730	1.218	31	6.032	1.471	31	6.096	1.220
Experimental LEA #3	33	5.878	1.218	17	5.588	1.277	24	6.500	0.834	23	5.956	1.397
Experimental LEA #4	27	5.925	1.439	23	5.652	1.824	29	6.137	1.328	27	5.962	1.453
Control LEA #1							30	6.133	1.224	20	6.150	0.812
Control LEA #2							36	6.027	1.403	33	5.909	1.011
Total	127			91			185			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3			T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.		F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	8.301	.01	12.083	.001		0.047	NS	1.894	NS
Experimental LEA #2	Row	0.005	NS	0.022	NS		6.503	.05	8.466	.01
Experimental LEA #3 W/	Col.	0.897	NS	5.911	.05		1.996	NS	0.047	NS
Experimental LEA #4	Row	0.034	NS	0.269	NS		0.489	NS	0.010	NS
Experimental LEA #1 W/						Col.	0.010	NS		
Control LEA #1						Row	6.060	.05		
Experimental LEA #2 W/						Col.	0.029	NS		
Control LEA #1						Row	0.104	NS		
Experimental LEA #3 W/						Col.	2.134	NS		
Control LEA #2						Row	1.314	NS		
Experimental LEA #4 W/						Col.	0.390	NS		
Control LEA #2						Row	0.121	NS		

Item 2 : My manager has expressed the belief that the AMA's training program has been helpful.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.451	1.586	25	5.240	1.984	32	6.531	0.671	31	6.354	0.838
Experimental LEA #2	36	5.361	1.807	26	5.538	1.654	31	5.870	1.586	32	5.437	1.342
Experimental LEA #3	33	4.454	2.180	17	5.411	1.169	24	5.875	1.650	23	5.521	1.377
Experimental LEA #4	27	4.518	2.343	23	5.304	1.635	29	5.172	2.054	26	5.076	1.622
Total	124			91			116			112		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	0.768	NS	8.091	.01	2.146	NS	0.694	NS
Experimental LEA #2	Row	0.262	NS	0.401	NS	14.364	.001	9.046	.01
Experimental LEA #3 W/	Col.	4.256	.05	0.188	NS	0.432	NS	4.617	.05
Experimental LEA #4	Row	0.002	NS	1.129	NS	2.830	NS	0.253	NS

Item 3 My manager understands planning theory and is able to put it into practice.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experimental LEA #1	32	6.218	0.792	31	5.935	0.853
Experimental LEA #2	31	5.806	1.222	32	5.750	1.077
Experimental LEA #3	24	5.833	0.816	23	5.391	1.117
Experimental LEA #4	29	5.482	1.183	27	4.851	1.725
Control LEA #1	30	5.933	0.980	20	5.550	1.276
Control LEA #2	36	5.222	1.605	31	5.161	1.185
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	0.907	NS
Experimental LEA#2	Row	2.809	NS
Experimental LEA#3W/	Col.	4.562	.05
Experimental LEA#4	Row	3.139	NS
Experimental LEA#1W/	Col.	3.293	NS
Control LEA #1	Row	3.335	NS
Experimental LEA#2W/	Col.	1.028	NS
Control LEA #1	Row	0.028	NS
Experimental LEA#3W/	Col.	1.093	NS
Control LEA #2	Row	3.059	NS
Experimental LEA#4W/	Col.	1.738	NS
Control LEA #2	Row	0.008	NS

Item 4 I believe my organization gives me adequate training to do my work effectively.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	6.093	0.856	31	5.741	0.998
Experimental LEA #2	31	5.322	1.681	32	5.437	1.216
Experimental LEA #3	24	5.625	0.824	23	5.521	0.897
Experimental LEA #4	29	4.965	1.636	27	4.851	1.511
Control LEA #1	30	5.433	1.165	20	5.750	0.966
Control LEA #2	36	5.138	1.457	33	5.212	1.293
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	0.294	NS
Experimental LEA#2	Row	6.062	.05
Experimental LEA#3W/	Col.	0.177	NS
Experimental LEA#4	Row	6.657	.01
Experimental LEA#1W/	Col.	0.008	NS
Control LEA #1	Row	2.877	NS
Experimental LEA#2W/	Col.	0.736	NS
Control LEA #1	Row	0.708	NS
Experimental LEA#3W/	Col.	0.004	NS
Control LEA #2	Row	3.071	NS
Experimental LEA#4W/	Col.	0.005	NS
Control LEA #2	Row	1.014	NS

Item 5 I feel good about my manager's ability to plan.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	6.437	0.715	31	6.290	0.863
Experimental LEA #2	31	6.000	1.341	32	5.906	1.117
Experimental LEA #3	24	5.875	0.899	23	5.347	1.335
Experimental LEA #4	29	5.724	1.306	27	5.444	1.648
Control LEA #1	30	6.366	1.066	20	6.250	0.716
Control LEA #2	36	5.805	1.450	33	6.000	0.935
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	0.425	NS
Experimental LEA#2	Row	4.949	.05
Experimental LEA#3W/	Col.	2.333	NS
Experimental LEA#4	Row	0.010	NS
Experimental LEA#1W/	Col.	0.638	NS
Control LEA #1	Row	0.113	NS
Experimental LEA#2W/	Col.	0.242	NS
Control LEA #1	Row	2.766	NS
Experimental LEA#3W/	Col.	0.542	NS
Control LEA #2	Row	1.665	NS
Experimental LEA#4W/	Col.	0.030	NS
Control LEA #2	Row	1.721	NS

Item 6 My manager provides me with adequate support to perform my job.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	6.500	0.508	31	6.419	0.672
Experimental LEA #2	31	5.709	1.395	32	5.843	1.080
Experimental LEA #3	24	5.916	0.974	23	5.782	1.241
Experimental LEA #4	29	5.793	1.206	27	5.185	1.545
Control LEA #1	30	5.966	1.351	20	6.050	0.998
Control LEA #2	36	5.861	1.457	33	5.787	1.139
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	0.023	NS
Experimental LEA#2	Row	15.428	.001
Experimental LEA#3W/	Col.	2.193	NS
Experimental LEA#4	Row	2.071	NS
Experimental LEA#1W/	Col.	0.000	NS
Control LEA #1	Row	6.471	.05
Experimental LEA#2W/	Col.	0.210	NS
Control LEA #1	Row	0.956	NS
Experimental LEA#3W/	Col.	0.195	NS
Control LEA #2	Row	0.011	NS
Experimental LEA#4W/	Col.	1.981	NS
Control LEA #2	Row	1.920	NS

Item #1: Fall 1970 to Spring 1971

Item #1, My manager makes it clear that he is committed to the success of our projects, is the first variable to be considered in our study of Top Management Support for Planning. None of the Experimental LEA's differed significantly from each other, either before or immediately after training. But regarding change in managerial commitment within each organization, a considerable reduction was noted in EL1. From showing the highest level of commitment before training, EL1 dropped to the lowest immediately after training. A fall of such magnitude was ascribed to a negative effect of training. EL2, EL3, and EL4 also dropped in this regard; however, they did not decline nearly so much as EL1, nor could we measure any influence of the process at Hamilton.

Item #1: Spring 1971 to Fall 1971

In every Experimental group, managers became much more committed to project success between Spring and Fall of 1971. Major increases on this variable produced a positive training effect in EL1, EL2, EL3, and EL4. The most impressive comeback occurred in EL1; this observation has almost appeared standard operating procedure for that group in T2-T3 comparisons. They were highest in T1; dropped to lowest in T2; and now have climbed back to the summit of the list. This is particularly surprising considering that EL1 was able to regain its T1 position at a time when their "competition" was also registering sizable increases in expressed managerial support.

Item #1: Fall 1971 to Spring 1972

The upward trends of the preceding period continued for EL1; they also increased their lead over most of the field. By contrast to EL2 and CL1, they had a significant advantage in managerial support for projects. There were no other changes or differences, and the rise observed in EL1 was insignificant. Thus, even considering the Control groups, about the same commitment was recorded in Fall 1971 as in Spring 1972. Under these circumstances, no training effects can be assigned.

Item #1: Fall 1970 to Spring 1972

An overall evaluation of what the AMA program accomplished must compare the observed support for projects before training with current levels of support. Such a Fall 1970 to Spring 1972 comparison is the best basis on which to assess the influence of AMA change strategies. The evaluation reveals that no training effects existed in any of the organizations; none of them changed over time to a degree sufficient to justify any causal connection of change to the AMA training experience.

Item #2: Fall 1970 to Spring 1971

Item #2, My manager has expressed the belief that the AMA's training program has been helpful, pertains only to Experimental LEA's. Comparing statements by managers in these organizations before and after they went up to Hamilton provides some evidence of training effects. EL3 and EL4 experienced positive effects from being trained in planning by AMA; both showed gains in favorable attitudes expressed by superiors toward the AMA program. Since some occurrence during, or closely connected with, the training process must have made them feel this way, positive effects of training could be attributed to EL3 and EL4. Managerial support for the training program, on the other hand, was stable in EL1 and EL2.

Item #2: Spring 1971 to Fall 1971

In this period neither EL3 nor EL4 varied their opinions about training, nor did any significant differences appear between them. In EL1 and EL2, substantial growth in favorable attitudes was measured. This increase was sufficient to claim positive training effects for both organizations. No similar conclusion for EL3 and EL4 was possible.

Item #2: Fall 1971 to Spring 1972

All of the Experimental LEA's found their managers less supportive of the AMA program in Spring 1972 than they had been in Fall 1971. No effects of training could be assigned, however, due to the insignificance of this decline. EL1 was substantially more favorable toward training than EL2 but neither changed over time.

Item #2: Fall 1970 to Spring 1972

The AMA was credited with positive training effects in EL3 and EL4 for this period. In both, organization managers thought the AMA program was more helpful a year after training had ended than they had expected it to be beforehand. No training effects occurred in EL1 and EL2 although EL1 managers were much more favorably disposed toward the AMA program than their counterparts in EL2.

Item #3: Fall 1971 to Spring 1972

Item #3 is My manager understands planning theory and is able to put it into practice. The four Experimental LEA's and the Control LEA's were asked to respond to this statement. Subsequent analysis indicated no training effects except in the cases of EL3 and EL4. Both organizations thought less of managerial competence in planning in the Spring than they had during the preceding Fall, a decline that constituted a negative training effect. No other comparison revealed differences between the groups or within one group over time.

Item #4: Fall 1971 to Spring 1972

Item #4, I believe my organization gives me adequate training to do my work effectively, was applicable between the Fall of 1971 and the Spring of 1972. The status of in-service training was higher in EL1 than in EL2, while EL3 thought more highly of their in-service program than EL4 did. Despite these differences between Experimental LEA's, no difference was considerable enough to create a change over time, i.e., disparities in the Fall continued into the Spring at nearly the same relative levels. Addition of the control groups did not alter this impression; Experimental/Control comparisons revealed no differences or changes in the quality of in-service training made available to members of those organizations. On account of this prevailing similarity, the AMA was not responsible for any training effects in trainee LEA's.

Item #5: Fall 1971 to Spring 1972

The effect of AMA training on managerial support for planning was also measured by an analysis of reactions to Item #5, I feel good about my manager's ability to plan. All organizations encountered minor decreases in this area between Fall 1971 and Spring 1972. But in T3, EL1 felt best about superiors' competence in planning and this high position carried into T4. EL2 also showed much less confidence in this managerial skill than EL1 had shown in their managers. Aside from these secondary considerations, no difference existed between EL3/EL4 and none of the Experimental LEA's modified their opinions over time. The absence of change was not reversed by evaluation of the Control LEA's. Comparisons between the Experimental LEA's, which received training, and the Control LEA's, which did not, reveals no differences or changes. It follows from this evidence that the AMA cannot be responsible for any training effects.

Item #6: Fall 1971 to Spring 1972

Item #6, My manager provides me with adequate support to perform my job, is the final variable in this section. Except for EL2, the Experimental LEA's all showed slight decreases between T3-T4 in support given by superiors to their subordinates' jobs. The small loss in EL2, however, was not enough to avoid being significantly lower than the support levels measured in EL1. EL1 was also much higher than the Control LEA in this regard. No other differences or changes of significance were reported. The fact that both Experimental and Control comparisons revealed no movement either way gives us more confidence in our measurements. Consequently, no training effects were registered in any of the Experimental LEA's concerning job-related assistance to subordinates.

DATA SUMMARY

Top Management Support
for Planning

Fall, 1970 - Spring, 1972

		IMPACT OF TRAINING		
Item	Type of Data QUESTIONNAIRE	Positive Effect	No Effect	Negative Effect
1	My manager makes it clear he is committed to the success of our projects.		EL1,EL2, EL3,EL4	
2	My manager has expressed the belief that the AMA's training program has been helpful.	EL3,EL4	EL1,EL2	
3	My manager understands planning theory and is able to put it into practice.		EL1,EL2	EL3,EL4
4	I believe my organization gives me adequate training to do my work effectively.		EL1,EL2, EL3,EL4	
5	I feel good about my manager's ability to plan.		EL1,EL2, EL3,EL4	
6	My manager provides me with adequate support to perform my job.		EL1,EL2, EL3,EL4	

This category of twenty-four variables shows, with four exceptions (two positive and two negative), no significant effects of training on top management support for planning in the Local Education Agencies.

Two positive effects were recorded in EL3 and EL4 concerning the support of top management for the AMA program. These same school districts experienced statistically significant drops in their mean scores in a T3-T4 comparison concerning their managers' knowledge of planning theory. Apparently there was increased awareness and consequently increased frustration as a result.

Again, all the other items in this category reflect the consistent pattern in the EL's of no training effects, at least for most items.

The addition of the CL's in T3-T4 produced only two significant Row variances in this data, indicating that generally no differences appeared between the Experimental EL's and the CL's.

The reader is again reminded that this data--like all the attitudinal data--must be interpreted with caution because we lacked a pre-test Control group. The same admonition applies to the data that appears in T3-T4 only.

D. Credibility of the Planning Process

The data below refer to the assumption that, in order to be effective within the organization, the planning process must be thought credible by it. We are interested in how important the LEA's consider planning, and what role the training program played in redefining that role. Four questionnaire items address this issue.

1. As I see it, planning is an integral part of running the state's schools.

   Points of Time: T1, T2, T3, T4

2. As I see it, persons in this organization put a lot of effort into planning.

   Points of Time: T3, T4

3. My capability to plan effectively will positively affect my future career in this organization.

   Points of Time: T3, T4

4. The activities relating to planning are having an effect on the policy of this organization.

   Points of Time: T3, T4

Item 1 : As I see it, planning is an integral part of running the state's schools.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	6.571	0.503	25	5.480	1.636	32	6.500	0.915	31	6.483	0.676
Experimental LEA #2	39	6.384	0.906	26	6.076	0.976	31	6.580	0.620	32	6.343	0.970
Experimental LEA #3	33	6.363	1.025	17	6.058	1.197	24	6.375	0.769	23	5.956	1.065
Experimental LEA #4	27	6.481	0.802	23	6.043	1.691	29	6.344	0.897	26	6.307	0.970
Control LEA #1							30	6.766	0.430	20	6.550	0.686
Control LEA #2							36	5.861	1.437	33	6.090	0.913
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	12.649	.001	14.318	.001	0.763	NS	0.205	NS
Experimental LEA #2	Row	1.086	NS	2.831	NS	0.042	NS	1.330	NS
Experimental LEA #3 W/	Col.	2.291	NS	1.557	NS	1.519	NS	2.400	NS
Experimental LEA #4	Row	0.043	NS	0.008	NS	0.754	NS	1.564	NS
Experimental LEA #1 W/	Col.					0.744	NS		
Control LEA #1	Row					1.520	NS		
Experimental LEA #2 W/	Col.					2.772	NS		
Control LEA #1	Row					2.073	NS		
Experimental LEA #3 W/	Col.					0.202	NS		
Control LEA #2	Row					0.818	NS		
Experimental LEA #4 W/	Col.					0.234	NS		
Control LEA #2	Row					3.096	NS		

Item 2 As I see it, persons in this organization put a lot of effort into planning.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experimental LEA #1	32	5.812	0.820	32	5.500	1.135
Experimental LEA #2	31	5.322	1.446	32	5.250	0.915
Experimental LEA #3	24	6.000	0.780	23	5.521	1.122
Experimental LEA #4	29	5.275	1.360	27	4.370	1.390
Control LEA #1	30	5.400	1.135	20	5.050	1.276
Control LEA #2	36	5.277	1.322	33	5.333	1.241
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	0.967	NS
Experimental LEA#2	Row	3.571	NS
Experimental LEA#3W/	Col.	8.412	.01
Experimental LEA#4	Row	15.454	.001
Experimental LEA#1W/	Col.	2.565	NS
Control LEA #1	Row	4.348	.05
Experimental LEA#2W/	Col.	0.844	NS
Control LEA #1	Row	0.071	NS
Experimental LEA#3W/	Col.	0.917	NS
Control LEA #2	Row	4.257	.05
Experimental LEA#4W/	Col.	3.171	NS
Control LEA #2	Row	4.087	.05

Item 3 My capability to plan effectively will positively affect my future career in this organization.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	5.968	1.402	31	5.870	1.258
Experimental LEA #2	31	6.161	0.820	32	5.750	1.016
Experimental LEA #3	24	5.958	1.398	23	5.782	1.277
Experimental LEA #4	29	6.275	0.648	27	5.888	1.250
Control LEA #1	30	5.733	1.460	20	5.900	1.209
Control LEA #2	36	6.138	1.245	33	5.969	0.951
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	1.549	NS
Experimental LEA#2	Row	0.030	NS
Experimental LEA#3W/	Col.	1.500	NS
Experimental LEA#4	Row	0.8517	NS
Experimental LEA#1W/	Col.	0.017	NS
Control LEA #1	Row	0.159	NS
Experimental LEA#2W/	Col.	0.313	NS
Control LEA #1	Row	0.404	NS
Experimental LEA#3W/	Col.	0.566	NS
Control LEA #2	Row	0.643	NS
Experimental LEA#4W/	Col.	2.127	NS
Control LEA #2	Row	0.021	NS

Item 4 The activities relating to planning are having an effect on the policy of this organization.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experimental LEA #1	32	6.218	0.750	31	5.870	0.921
Experimental LEA #2	31	5.387	1.453	32	5.375	1.157
Experimental LEA #3	24	5.625	0.923	23	5.130	1.057
Experimental LEA #4	29	5.724	1.250	26	4.923	1.547
Control LEA #1	30	5.733	1.048	20	5.600	0.994
Control LEA #2	36	4.972	1.664	31	4.838	1.344
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	0.841	NS
Experimental LEA#2	Row	11.453	.001
Experimental LEA#3W/	Col.	7.037	NS
Experimental LEA#4	Row	0.049	NS
Experimental LEA#1W/	Col.	1.835	NS
Control LEA #1	Row	4.536	.05
Experimental LEA#2W/	Col.	0.100	NS
Control LEA #1	Row	1.557	NS
Experimental LEA#3W/	Col.	1.529	NS
Control LEA #2	Row	3.459	NS
Experimental LEA#4W/	Col.	3.041	NS
Control LEA #2	Row	2.435	NS

Item #1: Fall 1970 to Spring 1971

Item #1 of this section, As I see it, planning is an integral part of running the State's schools, was put to persons in the Experimental LEA's across four points in time and to people in Control LEA's, twice. Planning was seen as important by all four Experimental groups between Fall 1970 (prior to training) and Spring 1971 (immediately after training). No great differences between any of these organizations were noted. However, EL1's estimate of planning steeply declined. Their reductions were significant, and were held to be negative training effects. None of the other groups seemed to be affected one way or the other.

Item #1: Spring 1971 to Fall 1971

During 1971, EL1 attached much more importance to planning than earlier; their opinion of it rose so far that positive training effects could be assigned. No other Experimental group experienced a comparable increase, although all rose somewhat. Substantial differences did not exist among any of them.

Item #1: Fall 1971 to Spring 1972

The AMA is not accountable for any training effects during this period. This decision is based not only on our usual Experimental group comparisons, but also on comparisons of each organization which had training to other Control organizations which did not undergo training. Increases or decreases in how important planning was thought by the Experimental LEA's was thus contrasted to change in the Control LEA's. The Experimental group and Experimental/Control group comparisons reached identical conclusions: no training effects. None of the LEA's changed their views between Fall 1971 and Spring 1972, nor did any differences appear between them.

Item #1: Fall 1970 to Spring 1972

To assess the overall impact of AMA training on expressed LEA attitudes toward the integral role of planning in State school administration, a longitudinal comparison was made. Each Experimental LEA's feeling on this issue before training was matched with its attitudes a year after training. In no case did an LEA differ substantially from another or from itself over time. Thus we ascribed no effects of AMA training to any Experimental LEA.

Item #2: Fall 1971 to Spring 1972

Item #2 is, As I see it, persons in this organization put a lot of effort into planning. It attempted to evaluate effort invested in the planning process by the Experimental LEA's between the Fall of 1971 and the Spring of 1972. Addition of Control LEA's buttressed and confirmed conclusions made on the basis of the Experimental LEA comparisons alone. In reference to the Control LEA's, both EL1 and EL3 put more work into planning than CL1 and CL2 respectively; and EL4 put less than either Control group. The gap between EL3 and EL4 on this issue and the major reduction of planning-related effort in EL4 over time warrant assignment of negative effects in that organization. EL4 did less work associated with planning in T4 than they had in T3.

Item #3: Fall 1971 to Spring 1972

One worthwhile evaluation which can be made in order to study the credibility of the planning process is to see how great a contribution expertise in planning made to advancement within the Experimental LEA's. If the connection was close and persons in those organizations felt planning could aid their careers, this could be a good indication of the future success of the planning process. All LEA's had declining scores on My capability to plan effectively will positively affect my future career in the organization (Item #3) between Fall 1971 and Spring 1972. But in no case was the decrease significant nor was there a difference between any of the Experimental or Control groups. Statistically speaking, planning skills and future careers had comparable connections made between them during both points of time. Consequently, it was not possible to attribute any effects of training to the AMA program.

Item #4: Fall 1971 to Spring 1972

The connection between planning and policy was made on Item #4, The activities relating to planning are having an effect on the policy of this organization. Differences were observed between EL1 and EL2 and CL1. The influence of planning in that case was greater in EL1 than in the other Experimental or Control groups. No other sizable differences existed. In all LEA's, planning's connection with policy was viewed as getting more tenuous as time passed; however, the lessened influence was too small to hold the AMA training program responsible for it. For that reason, no training effects were determined in any Experimental LEA.

DATA SUMMARY

Credibility of the
Planning Process

Fall, 1970 - Spring, 1972

	Type of Data	IMPACT OF TRAINING		
Item	QUESTIONNAIRE	Positive Effect	No Effect	Negative Effect
1	As I see it, planning is an integral part of running the state's schools.		EL1, EL2, EL3, EL4	
2	As I see it, persons in this organization put a lot of effort into planning.		EL1, EL2, EL3	EL4
3	My capability to plan effectively will positively affect my future career in this organization.		EL1, EL2, EL3, EL4	
4	The activities relating to planning are having an effect on the policy of this organization.		EL1, EL2, EL3, EL4	

With remarkable consistency, the credibility of the planning process in the Experimental LEA's was not affected by AMA training. These organizations viewed planning in nearly the same light both before and after training. The only exceptions to this general rule were Items #2 and #5.

The effort devoted to planning (Item #2) was unaffected by training in EL1, EL2, or EL3. However, in EL4, it was generally felt that people did not spend as much time on planning in Spring 1972 as they had done in Fall 1971. The other Experimental LEA's also experienced declining levels of planning input; but only in the case of EL4 was this reduction sizable enough to justify attributing negative effects of training to AMA.

This decision on effect was made only after careful consideration dictated by the absence of pre-training data from T1. Interpretation of T3-T4 data was slightly complicated because no baseline data existed against which to compare recent changes in order to determine training effects.

Since the Control LEA's were not inserted in the study until T3-T4, the usual T1-T4 test for training effects was not possible. That is, the effects of training could not be determined using an Experimental group/Control group comparison between Fall 1970 and Spring 1972. For an acceptable substitute, the research team retained the T1-T4 time frames, but compared Experimental LEA's within the same state (EL1 with EL2, and EL3 with EL4).

Considering this evidence, we concluded overall that AMA training did not influence the credibility of the planning process in the Experimental LEA's.

AREA 4: SUMMARY AND CONCLUSIONS

In this chapter we have discussed the actions taken by the Experimental organizations toward meeting the first thirteen training goals and criteria of the AMA, as well as the attitudes of organizational participants toward them. Here this massive collection of data is summarized to give readers a clear overview of what follows.

Linking Program with Organizational Impact

This evaluation effort is based on the premise that a direct relationship exists between the design of the training program, the way in which it was conducted and potential organizational impact.

In our previous discussion of the training program[43] we mentioned three types of attitude change--identification, compliance, and internalization. The AMA training program was defined as one which primarily required identification and compliance on the part of its clients.

This conclusion was based on an analysis of training design and its mode of implementation. At all points of the planning process, the boundaries of legitimate discourse and program content were controlled by the AMA trainer. These boundaries were based on the AMA's concept of effective organizational planning. The main emphasis of its program was to teach a planning process; to this end, discussion within the group was held to the level of rational dialogue and exchange of opinion.

This analysis concluded that in order for attitude change to occur within the context of a program of this nature, the individual must identify with the other members of his team and comply, that is, do what was expected of him in a particular situation. An external stimulus would be necessary to produce a change in attitude.

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[43] Chapter One of this report and the Introduction to Chapter Four.

On the other hand, internalized attitude change is incorporated into the person's own values and does not depend on external support for activation. In order for internalized attitude change to occur, however, both logical discourse and emotions must be considered in developing a training program. As has been discussed above, this was not the case in the AMA program. Since most program time was allotted to lectures, the AMA's primary vehicle of attitudinal change was the trainees' compliance and identification with the concepts, experiences, and values of the lecturers.

Such attitude change is usually evanescent unless it receives continual reinforcement. It may also result in pseudo-compliance on the part of trainees.

Because we consider attitude change a necessary though not a sufficient condition of altering organizational behavior and improving organizational effectiveness, we have presented in this chapter evidences of both attitudes and actions. One without the other is meaningless, we think.

A summary of the attitudes and actual progress toward the first thirteen AMA training goals is presented below, followed by conclusions based on the data.

SUMMARY OF ACTION FINDINGS
SED LEVEL
AMA CRITERIA 1 - 13
FALL, 1970 to SPRING, 1972

No.	Criteria	AMOUNT OF PROGRESS		
		Minimum	Moderate	Maximum
1.	Agreed upon a definition of the institution's mission			E1,E2
2.	Established continuing objectives and planning procedures for long-range achievement of the institution's mission			E1,E2
3.	Identified resources and constraints		E1,E2	
4.	Differentiated between where the institution is going and where it wants to go		E1,E2	
5.	Modified previously established objectives		E1,E2	
6.	Identified and analyzed alternative courses of action		E1,E2	
7.	Determined priorities		E1	E2
8.	Made strategic action assignments	E1	E2	
9.	Defined standards of performance for key administrators	E1	E2	
10.	Specified task completion dates	E1	E2	
11.	Designed supplementary planning efforts			E1,E2
12.	Assigned responsibilities to subordinate units		E1,E2	
13.	Designed a methodology by which future performance may be evaluated in relation to the performances specified in the plan	E1,E2		

SUMMARY OF ATTITUDINAL FINDINGS

DATA SUMMARY

CAUSAL VARIABLES - STATE DEPARTMENT OF EDUCATION

Fall, 1970 - Spring, 1972

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
	DEFINITION OF THE MISSION OF THE ORGANIZATION			
	CONTENT			
1	Definition of the Institution's Mission		E1	E2
2	Sense of SED Mission		E1,E2	
3	Feelings about the direction the organization is moving		E1,E2	
	QUESTIONNAIRE			
4	The kinds of things I am doing will make a long term contribution to education.		E1	E2
	DEVELOPMENT OF ORGANIZATIONAL OBJECTIVES & PRIORITIES			
	CONTENT			
1	Modify previously established objectives		E1	E2
2	Identify and analyze alternative courses of action		E1,E2	
3	Determine priorities			E1,E2
4	Do you feel that the objectives developed as a result of AMA training reflect the most serious and pressing needs of state education?		E1,E2	
	QUESTIONNAIRE			
5	The goals of this organization are articulated.		E1,E2	
6	Our goals are realistic and attainable with our best efforts.		E1,E2	
7	The top priority objectives of state education are clear to me.		E1,E2	
8	I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.		E1,E2	

SUMMARY OF ATTITUDINAL FINDINGS (cont'd)

Item	Type of Data	Positive Effect	No Effect	Negative Effect
9	As I see it, the operation priorities of the objectives developed during AMA training are clear.		E1,E2	
	MOBILIZATION OF ORGANIZATIONAL PLANNING			
	CONTENT			
1	Define standards of performance for key administrators		E1,E2	
2	Specify task completion dates and action assignments		E1,E2	
3	Assign responsibilities to subordinate units	E2	E1	
4	Need for Performance Standards		INSUFFICIENT DATA	
5	Performance Standards--Extent of Use		(T4 ONLY) ON WHICH	
6	Existence of Performance Reviews		TO BASE A RESPONSE	
	QUESTIONNAIRE			
7	My organization's policy statements are clear.		E1,E2	
8	My organization's performance standards are understood.	E1,E2		
9	Good ways are used to let me know how I can improve my performance.		E1,E2	
10	I understand what results must be produced to achieve the stated objectives of this organization.		E2	E1
	ROLE OF THE PLANNING UNIT			
	CONTENT			
1	Awareness of need to evaluate our programs		E1,E2	
2	Available to answer planning questions		E1,E2	
3	Writing guidelines for plan development		E1	E2
4	Reviewing and refining plans		E1,E2	
5	Provides leadership in the implementation of planning		E1,E2	
6	Provides in-service training in planning		E1,E2	

SUMMARY OF ATTITUDINAL FINDINGS (cont'd)

Item	Type of Data	Positive Effect	No Effect	Negative Effect
	QUESTIONNAIRE			
7	The planning unit has been helpful to me.		E1,E2	
	DEVELOPMENT OF EVALUATION TECHNIQUES			
	CONTENT			
1	Designed a methodology by which future performance may be evaluated in relation to the performance specified in the plan.			E1,E2
2	Informal Feedback		INSUFFICIENT DATA (T4 ONLY) ON WHICH TO BASE A RESPONSE	
3	Performance Reviews			
4	Questionnaires			
5	Task Completion Inventories			
6	Unobtrusive Measures			
	QUESTIONNAIRE			
7	I have good ways for knowing how good our results are.	E2		E1
8	My organization has reliable ways for knowing how well it is attaining its objectives.		E1,E2	
9	I think that the objectives developed during AMA training are clearly stated with respect to results expected.		E1,E2	
	TOP MANAGEMENT SUPPORT FOR PLANNING			
	CONTENT			
1	Adequate Resources (money and information)		E1,E2	
2	Control System expressed through decisionmaking process		E1,E2	
	QUESTIONNAIRE			
3	My manager makes it clear he is committed to the success of our projects.	E1		E2
4	My manager has expressed the belief that the AMA's training program has been helpful.		E1,E2	
5	My manager understands planning theory and is able to put it into practice.		E1,E2	

SUMMARY OF ATTITUDINAL FINDINGS (cont'd)

Item	Type of Data	Positive Effect	No Effect	Negative Effect
6	I believe my organization gives me adequate training to do my work effectively.		E1,E2	
7	I feel good about my manager's ability to plan.		E1,E2	
8	My manager provides me with adequate support to perform my job.	E1		E2
	THE CREDIBILITY OF THE PLANNING PROCESS			
	CONTENT			
1	Establish credibility of planning		E1	E2
2	Role of Planning: how integral	E1,E2		
3	Role of Planning: how much is needed		E1,E2	
4	Role of Planning: emergence	E1,E2		
	QUESTIONNAIRE			
5	As I see it, planning is an integral part of running the state's schools.			E1,E2
6	As I see it, persons in this organization put a lot of effort into planning.			E1,E2
7	My capability to plan effectively will positively affect my future career in this organization.	E1,E2		
8	The activities relating to planning are having an effect on the policy of this organization.		E1	E2

Action and Attitudinal Findings: SED's

An analysis of the actual results in terms of written organizational documents that were produced in efforts to meet the first thirteen American Management Association's training criteria indicates that, with a few exceptions, the State Education Departments have made moderate progress toward all criteria. The research team believed that most of the action taken on most of the criteria illustrated that the organizations in question had done more than just address the criterion (minimum progress) but had not actually completed the criterion (maximum progress). The initiation of a satisfactory planning element was present, however.

Reviewing all criteria, the research team determined five instances warranting a minimum rating and seven items where the criteria were met.

A summary of the attitudinal findings related to these causal variables in the SED's reveals, again with a few exceptions, a pattern of no effects on attitudes as a result of the AMA training effort.

Comparing the action and attitudinal findings related to AMA criteria/goals #1 and #2, we find that, while both organizations spent considerable time developing these statements, no apparent effect on attitudes toward them was observed within the organizations. In fact, there were two negative effects recorded in State E2. There, managers felt less cleat about their mission two years after training than before. They also thought less of the contribution they were making to education after training than before.

Moving on to AMA criteria #3 through #7 (the development of specific objectives and priorities), we again find a pattern of moderate progress on the action side of the ledger and no effects of training on attitudes, with three exceptions. Only State E2 received a maximum rating concerning the degree to which priorities had been determined. In this state the priorities were widely discussed and published.

Three negative effects appear on the attitudinal data. Two of these occur in State E2, which showed negative training effects concerning the specific objectives and the determination of priorities. While State E2 has determined its priorities, this shows that some problem with them has arisen within the organization. The negative effect in State E1 appears to be the result of a lack of clarity within the agency concerning its priorities.

AMA criteria #8 through #10 are concerned with what we have termed the Mobilization of Organizational Planning. These criteria are specifically related to developing performance standards for personnel, assigning responsibilities and setting task completion dates.

A clear difference between the states emerges concerning actions on these items. State E1 achieved minimal progress on all three of these items while State E2 made moderate progress. This reflects, as we have discussed in Chapter Four, a clear decision by the agencies. State E1 decided to place maximum emphasis on the development of written guidelines for planning, while State E2 stressed development of job descriptions.

The attitudinal data on these items indicates that, generally, training had no effect. Two positive effects were observed: managers in both states were less clear about their performance standards after training than before, but because their awareness did not drop as fast as the awareness of managers in the Control State, we have treated this as a positive effect. A negative training effect appears in State E1, where respondents grew more uncertain about expected results as time passed. Again, this may be related to the lack of clear performance standards in that state.

States E1 and E2 made considerable progress with supplementary planning efforts (Item #11), but only moderate progress in assigning responsibilities to subordinate units (Item #12). Both states have been involved in a variety of activities designed to supplement their planning efforts.

The attitudinal data indicate no change in attitudes toward the activities of the planning unit, however. The one exception to this appears in State E2, where a negative training effect appears related to writing guidelines for plan development. Again, this reflects that agency's decision to develop job descriptions before forming planning guidelines.

The thirteenth goal--the development of an evaluation system--indicates a minimal level of progress in both states, and reflects a common problem in education, one which AMA training did little to correct. Educational agencies (like most organizations), simply do not have personnel who are expert in evaluation; as a result, this aspect of the planning process is generally neglected.

The lack of movement toward evaluation is reflected in the attitudinal data. Negative effects were recorded in both E1 and E2 concerning the establishment of an evaluation system. State E2 did experience a positive effect related to general knowledge of results, although this gain is only relative. Personnel in E2 actually experienced a decline in their knowledge of expected results, but they did not decline as fast as the Control State and therefore experienced a positive training effect.

Attitudinal data related to top management support for planning and the degree to which planning is seen as a credible process indicates a number of positive as well as negative effects.

The eight items concerned with top management support for planning reveal a typical pattern. Almost no effects of training appear, with a few exceptions. In two instances, personnel in State E1 viewed their managers as more supportive and committed to subordinates' work than was true earlier. At the same time, personnel in State E2 experienced negative training effects on the same items. This data must be moderated, however, because we lack pre-training data on these items.

The credibility of organizational planning was affected by the AMA training program. Six positive effects and six negative effects were revealed by this data.

The AMA program did enhance the credibility of planning in the Experimental States. Planning came to be seen as more integral and as increasingly important to the state agencies. However, no effect was shown on attitudes about how much planning was needed. Top administrators in E2 also seemed to feel that planning became less credible with time.

The questionnaire items that appear here reveal more negative than positive effects. However, the lack of pre-training data for these items prompts us to be careful in assigning effects. Over time, personnel in both states saw planning as being more important to their careers. On the other hand, they saw people within the organizations putting less effort into planning with the passage of time. They also seemed to grow more aware that planning was little used in the school system as a whole.

SUMMARY OF ACTION FINDINGS
LEA LEVEL
AMA CRITERIA 1-13
FALL, 1970 to SPRING, 1972

		AMOUNT OF PROGRESS		
No.	Criteria	Minimum	Moderate	Maximum
1.	Agreed upon a definition of the institution's mission			EL1,EL2, EL3,EL4
2.	Established continuing objectives and planning procedures for long-range achievement of the institution's mission			EL1,EL2, EL3,EL4
3.	Identified resources and constraints		EL1,EL2, EL3,EL4	
4.	Differentiated between where the institution is going and where it wants to go	EL3	EL1,EL2, EL4	
5.	Modified previously established objectives		EL1,EL2, EL3,EL4	
6.	Identified and analyzed alternative courses of action	EL3	EL1,EL4	EL2
7.	Determined priorities	EL1,EL2, EL3,EL4		
8.	Made strategic action assignments	EL3	EL2,EL4	EL1
9.	Defined standards of performance for key administrators	EL1,EL2, EL3,EL4		
10.	Specified task completion dates		EL1,EL3	EL2,EL4
11.	Designed supplementary planning efforts	EL3	EL1,EL2, EL4	
12.	Assigned responsibilities to subordinate units		EL1,EL2, EL3,EL4	
13.	Designed a methodology by which future performance may be evaluated in relation to the performances specified in the plan	EL1,EL2, EL3,EL4		

SUMMARY OF ATTITUDINAL FINDINGS

DATA SUMMARY

CAUSAL VARIABLES - LOCAL EDUCATION AGENCIES

Fall, 1970 - Spring, 1972

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
	DEVELOPMENT OF ORGANIZATIONAL MISSION & OBJECTIVES			
	QUESTIONNAIRE			
1	The goals of this organization are articulated.	EL1	EL2,EL3, EL4	
2	Our goals are realistic and attainable with our best efforts.	EL1,EL2	EL3,EL4	
3	The top priority objectives for state education are clear to me.		EL1,EL2, EL3,EL4	
4	I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.		EL1,EL2, EL3,EL4	
5	As I see it, the organizational priorities of the objectives developed during AMA training are clear.		EL1,EL2, EL3,EL4	
6	The kinds of things I am doing will make a long term contribution to education.		EL1,EL2, EL3,EL4	
7	As I see it, my organization is moving in the right direction.		EL1,EL2, EL3,EL4	
	MOBILIZATION OF ORGANIZATIONAL PLANNING			
	QUESTIONNAIRE			
1	My organization's policy statements are clear.		EL1,EL2, EL3,EL4	
2	My organization's performance standards are clear.			
3	Good ways are used to let me know how I can improve my performance.	EL1,EL2	EL3,EL4	

SUMMARY OF ATTITUDINAL FINDINGS (cont'd)

Item	Type of Data	Positive Effect	No Effect	Negative Effect
4	I understand what results must be produced to achieve the stated objectives of this organization.		EL1,EL2	
5	The planning unit has been helpful to me.		EL1,EL2, EL3,EL4	
6	I have good ways for knowing how good our results are.		EL1,EL2, EL3,EL4	
7	My organization has reliable ways for knowing how well it is achieving its objectives.		EL1,EL2, EL3,EL4	
8	I think that the objectives developed during AMA training are clearly stated with regard to results expected.		EL1,EL2, EL3,EL4	
	TOP MANAGEMENT SUPPORT FOR PLANNING QUESTIONNAIRE			
1	My manager makes it clear he is committed to the success of our projects.		EL1,EL2, EL3,EL4	
2	My manager has expressed the belief that the AMA's training program has been helpful.	EL3,E14	EL1,EL2	
3	My manager understands planning theory and is able to put it into practice.		EL1,EL2	EL3,EL4
4	I believe my organization gives me adequate training to do my work effectively.		EL1,EL2, EL3,EL4	
5	I feel good about my manager's ability to plan.		EL1,EL2, EL3,EL4	
6	My manager provides me with adequate support to perform my job.		EL1,EL2, EL3,EL4	
	CREDIBILITY OF THE PLANNING PROCESS QUESTIONNAIRE			
1	As I see it, planning is an integral part of running the state's schools.		EL1,EL2, EL3,EL4	
2	As I see it, persons in this organization put a lot of effort into planning.		EL1,EL2, EL3	EL4

SUMMARY OF ATTITUDINAL FINDINGS (cont'd)

Item	Type of Data	Positive Effect	No Effect	Negative Effect
3	My capability to plan effectively will positively affect my future career in this organization.		EL1,EL2, EL3,EL4	
4	The activities relating to planning are having an effect on the policy of this organization.		EL1,EL2, EL3,EL4	

Action and Attitude Findings/LEA's

Where the Local Educational Agencies (LEA's) are concerned, Chapter Four was to assess the impact of AMA training on the causal variables associated with organizational change. The thirteen AMA training criteria were reviewed and applied to the agencies to determine the extent to which the goals were realized. We analyzed the attitudes of participants toward the development of organizational mission, mobilization of organizational planning, top management support for planning, and the credibility of the planning process.

The inventory taken in connection with the thirteen AMA criteria revealed that all had been addressed by the management teams from the LEA's, who had written something on each of the criteria. The research team felt that most of the actions taken on most of the criteria could be termed "moderate" progress; that is, the organization had done more than merely address the criterion--it had initiated a satisfactory element of successful planning.

If the agencies had been able to go beyond a beginning to approach completed action on the criterion, their progress would have been "maximum." Two criteria fell into the latter category: a definition of the institution's mission and its establishment of continuing objectives. The LEA's presented both, fully developed, in their planning documents. On the opposite end of the spectrum were "minimum" progress on various criteria, those on which virtually nothing had been done beyond superficial examination of possible issues or techniques. Efforts to establish priorities, performance standards, and evaluation methods were indeed minimal in all the planning documents we examined.

The attitudes section of the chapter was strikingly unable to attribute more than a few training effects to the

AMA program. The attitudinal summary charts on the impact of training repeatedly assigned LEA's to the middle, or "No Effects" column. On the basis of the reliable instruments used to measure effects, we conclude that the AMA team planning process did not create a favorable attitudinal environment for planning activities. Those LEA's that could be considered more favorable before training were similarly favorable a year after training. And those that had been more hostile to the changes implicit in management by objectives did not grow more friendly to such management.

Overall Conclusion on the Impact of AMA Training on SED/LEA Causal Variables

It has been argued throughout this report that actions and attitudes are both critical factors in evaluating any training program. Actions directed toward implementing the planning process can degenerate into meaningless paper-production without the support of people in the organization. Even receptive attitudes toward planning will not long endure if they are not reinforced by practical steps toward its development and use. It follows, therefore, that to determine the value of the AMA to these educational agencies regarding causal variables, one must examine what participants did as well as what they thought about what had been attempted.

AMA training definitely inspired the SED's and LEA's to devote more time and energy to planning. It also produced a wide range of planning materials. But the aggregate attitudes of those who were expected to accept and work with the planning process were unaffected by training. If attitudes associated with the causal variables were already receptive to planning before training began, then the AMA did not significantly alter that view within the organization. On the other hand, if persons felt confused about their goals, alienated from their managers, or uncertain of the benefit of planning, training also did little for them.

CHAPTER FIVE

INTERVENING VARIABLES

Overview

This chapter evaluates the impact of AMA training on the intervening variables in the experimental education agencies, variables which "reflect the internal state and health of the organization, e.g., the loyalties, attitudes, motivations, performance goals, and perceptions of all members and their collective capacity for effective interaction, communication, and decision making."[1] These variables are the middle link in the causal - intervening - end result variable chain.

Theoretically, implementing the AMA training goals (causal variables) should affect the decisionmaking process, leadership climate, and management team relations in the educational agencies (intervening variables). These internal changes should correlate positively with increases in the quantity and quality of the organization's output, particularly in planning (end-result variables).

Lack of successful impact upon intervening variables can impede or even prevent a training program from improving overall planning and output. Therefore, such variables should be important to the AMA training program, and a proper concern of this evaluation.

Our examination is divided into four sections. The first section looks at the AMA approach to the intervening variables. In the second section, we study the AMA's impact on these variables through the expressed attitudes of ESED participants. The consequences for the ELEA's is shown through another attitudinal data display in the third section. Based on the preceding three sections, the fourth offers the overall conclusions of the research team on this aspect of AMA training.

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[1] Rensis Likert, The Human Organization (New York: McGraw-Hill Book Company, 1967), p. 29.

Section 1: The AMA Approach

We have already discussed at some length the AMA's general approach to management training. At this point we need only extract from previous sections data relevant to the intervening variables, and review them here. The presentation of SED/LEA participant attitudes and our own analysis follows.

Assuming a rational process of decisionmaking, the AMA seeks to win the commitment of the chief executive of the educational agency to planning, and to involve his immediate subordinates in developing a long-range action plan.[2] AMA argues that its program is not just an academic exercise but a real-life situation in which hard decisions about the organization's future are made by the management team.[3] Planning is learned by doing.

> AMA has a unique solution. It is called the Team Process in Corporate Planning.
>
> This process was developed at the Center for Planning and Development of the American Management Association at Hamilton, New York. In it the chief executive officer (with his final authority) and the members of the top management team (with decision making responsibilities in over-all company operations) proceed, step by step, through a guided performance of the planning procedure. The team moves quickly--it learns by doing--and in two spaced out weeks it has produced its own action-oriented company plan.[4]

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[2] Lawrence A. Appley, "Manager Training in Proper Perspective," in AMA, "AMA: A Brief Description" (pamphlet).

[3] Raymond E. Klawuhn and Alexander J. Basso, "Final Report: Adapting and Testing Business Management Development Programs for Educational Administrators" (January, 1972), p. 7. It is interesting to note, however, that, according to the AMA, participants still thought of the training as training and not as an organizational planning process. See Klawuhn and Basso, op. cit., p. 35.

[4] Center for Planning and Development, American Management Association, "Developing and Implementing Strategic Long-Range Planning" (pamphlet).

Implicit in the AMA's approach is the assumption that this team planning process will insure commitment to the plans produced, since the people who created the plans will implement them. The element of team is emphasized as a vehicle to participative decisionmaking and an improved organizational climate. Given these expected positive internal changes, plans and programs toward the objectives the team sets are assumed to be favorably affected.

The AMA's approach relies completely upon a cognitive change strategy. They deal only with technical knowledge of planning and other aspects of developing and executing an organizational plan. The AMA assumes that by giving managers a cognitive awareness of the benefits of planning, instructing them in how to plan, and taking them through the team planning process, they will automatically gain their allegiance as well as support throughout the organization.

These assumptions overlook affective aspects of the planning process, such as:

> Receiving and giving nonevaluative feedback
> Owning and permitting others to have their own ideas, feelings and values
>
> Openness to new ideas, feelings, and values
> Experimentation, risk-taking, and new ideas and values.[5]

Trust, honesty, supportive personal relationships and other ingredients of a proper mix of intervening variables are not necessarily acquired through a rational process of team planning. A viable mix of rationalism and affective considerations demands, among other things, an appreciation of and expertise in organizational behavior and dynamics. AMA training deals with these elements indirectly, if at all. Learning that planning is useful and possible may affect a client's attitude toward the concept (albeit temporarily), but it will not benefit him or the agency in the long-run if his boss is personally antagonistic, his colleagues ruthlessly competitive, top management perceived as incompetent, or if fear rather than trust dominates the organizational environment. Even team training accomplishes little if conflicts are based on subjective tensions that are unrelated to the training's objective content.

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[5] Chris Argyris, Intervention Theory & Method: A Behavioral Science View (Reading, Mass.: Addison-Wesley Publishing Company, 1970), p. 66.

> I perceive a real facade and resistance to laying all the cards on the table when this group meets. . . . I don't think this kind of planning, a team planning, is going to work until you can get people to really think like they're on a team. And they sure didn't make much progress on that score up at Hamilton.[6]

Very little of the AMA approach addresses these complex aspects of organizational life. This gap gravely decreases the program's impact on the intervening variables.

Section 2: SED Attitudes

The data presented in this section measure the current state of the intervening variables in the State Education Departments (SED) that participated in the AMA program. Our specific concerns in this area have been organized under three categories:

A. Leadership Climate

B. Decisionmaking

C. Management Team Relations

Leadership climate refers to the environment fostered within the organization by those in authority. How decisions are made in the LEA's is a second important intervening variable. Finally, the AMA team planning process depends upon a management team. The extent to which such a team exists and maintains good relations indicates how much viable planning will be done.

This section includes content analysis and questionnaire data. Many of the items in both instruments cover four points in time equally spaced between Fall 1970 and Spring 1972. Other items are tested at two points in time. Some of the comparisons of questionnaire data are made between two experimental groups; most compare the experimental group with one--if not two--control group(s). The research team has greatest confidence in items that span four points in time and involve a control group comparison. In those cases where optimal comparisons were impossible, we were especially cautious in our interpretations. In any event, the effects which we did, or did not, attribute to AMA training are the outcomes of careful--and, we feel, accurate--analysis.

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[6] Consultant/Specialist, ESED #2.

Throughout this section, content analysis data will be presented first, in each category. These reflect the reactions of the top management of the two Experimental SED's (E1 and E2) and the first Control State (C1). In displaying the content analysis data, four kinds of information are provided:

1. Interview Question: From what question is the data drawn?

2. Range of Scale Possibilities: While the number of points on the scales is constant (7), the descriptive words attached to points on the scale vary with the question.

3. Point of Time: For each item the points in time at which the question was posed are indicated. (T1 = Fall 1970; T2 = Spring 1971; T3 = Fall 1971; T4 = Spring 1972.) In some cases this includes all four points in time; in others the data were gathered during Y2 only.

4. States: The states to which the category was applicable are identified.

Relevant questionnaire items have been sampled from multiple levels of the agencies and follow the content data. These include comparisons with two Control States (C1 and C2).

In the case of the data from the questionnaire we need to indicate only the points in time to which the question is relevant. The range of scalar possibilities was in all cases the same, from (1) not at all to (7) very often. As indicated above, questionnaire items were asked in Control state #2 in points of time T3 and T4 only, because this state entered the research design in Year 2.

A. Leadership Climate

The following items all come from the questionnaire and were asked in all four periods.

1. Based on information I have received from my boss, I know if I am measuring up in my job.

2. My manager encourages and supports innovation.

3. Higher management's reactions to the problems that reach them are fair.

4. My manager knows and understands the problems I face.

5. My manager recognizes when a problem is developing and does something constructive about it.

6. My manager shows confidence and trust in me.

Item 1 Based on information I have received from my boss, I know if I am measuring up in my job.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.436	1.046	73	5.342	1.387	68	4.867	1.691	40	5.150	1.350
Experimental SED#2	60	4.534	1.751	52	3.981	1.743	45	3.933	1.656	40	3.700	1.572
Control SED#1	66	5.500	1.256	61	4.836	1.551	67	5.134	1.324	61	4.868	1.488
Control SED#2							61	4.213	1.623	66	4.242	1.489
Total	165			186			241			207		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	1.519	NS	0.141	NS	0.001	NS	5.994	.05
W/Control SED #1	Row	4.455	.05	0.583	NS	0.001	NS	0.307	NS
Experimental SED#1	Col.					0.557	NS		
W/Control SED #2	Row					13.995	.001		
Experimental SED#2	Col.	19.848	.001	0.474	NS	1.420	NS	12.781	.001
W/Control SED #1	Row	8.848	.01	22.933	.001	32.074	.001	27.089	.001
Experimental SED#2	Col.					0.211	NS		
W/Control SED #2	Row					3.435	NS		

Item 2 My manager encourages and supports innovation.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	6.051	0.999	73	6.137	1.045	68	5.970	1.184	39	5.666	1.382
Experimental SED#2	60	5.900	1.189	52	5.135	1.534	45	5.020	1.581	40	4.150	1.477
Control SED#1	66	5.712	1.274	61	4.836	1.675	67	5.223	1.515	61	4.983	1.454
Control SED#2							61	5.426	1.717	66	5.166	1.342
Total	165			186			241			206		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	22.841	.001	0.541	NS	2.143	NS	8.430	.01
W/Control SED #1	Row	5.304	.05	38.695	.001	14.799	.001	7.658	.01
Experimental SED#1	Col.					2.204	NS		
W/Control SED #2	Row					7.574	.01		
Experimental SED#2	Col.	1.727	NS	0.424	NS	6.677	.01	45.758	.001
W/Control SED #1	Row	19.668	.001	0.053	NS	6.281	.05	2.965	NS
Experimental SED#2	Col.					6.645	.01		
W/Control SED #2	Row					11.238	.001		

Item 3 Higher management's reactions to the problems that reach them are fair.

	Fall, 1970			Spring, 1971			Fall, 1971			Spring, 1972		
	T1			T2			T3			T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.436	1.535	71	5.677	1.180	68	5.382	1.414	39	5.410	0.965
Experimental SED#2	60	4.950	1.512	49	4.673	1.420	45	5.066	1.420	38	4.421	1.463
Control SED#1	65	5.492	1.002	58	5.138	1.420	67	5.089	1.287	61	4.868	1.419
Control SED#2							61	5.287	1.362	65	5.258	1.369
Total	164			178			241			203		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1 W/Control SED #1	Col.	0.113	NS	1.416	NS	2.805	NS	3.707	NS
	Row	2.005	NS	5.819	.05	5.704	.05	2.013	NS
Experimental SED#1 W/Control SED #2	Col.					0.712	NS		
	Row					1.710	NS		
Experimental SED#2 W/Control SED #1	Col.	8.072	.01	0.633	NS	4.882	.05	9.847	.01
	Row	3.170	NS	2.604	NS	1.441	NS	7.284	.01
Experimental SED#2 W/Control SED #2	Col.					6.054	.05		
	Row					4.509	.05		

Item 4 My manager knows and understands the problems I face.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.589	0.992	73	5.410	1.278	68	5.338	1.322	39	5.333	1.131
Experimental SED#2	59	5.423	1.392	52	4.365	1.559	45	4.888	1.417	40	4.425	1.375
Control SED#1	65	5.707	1.377	64	5.343	1.555	67	5.298	1.279	60	4.966	1.413
Control SED#2							61	4.950	1.736	66	4.742	1.384
Total	163			189			241			205		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	2.313	NS	0.122	NS	0.925	NS	7.299	.01
W/Control SED #1	Row	0.020	NS	0.104	NS	1.347	NS	0.453	NS
Experimental SED#1	Col.					0.308	NS		
W/Control SED #2	Row					6.496	.05		
Experimental SED#2	Col.	13.922	.001	1.504	NS	4.304	.05	21.144	.001
W/Control SED #1	Row	10.967	.001	12.671	.001	6.152	.05	4.762	.05
Experimental SED#2	Col.					7.934	NS		
W/Control SED #2	Row					0.750	NS		

Item 5 My manager recognizes when a problem is developing and does something constructive about it.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.538	1.166	73	5.315	1.091	68	4.970	1.525	39	5.179	1.315
Experimental SED#2	60	4.966	1.495	52	3.980	1.577	45	4.466	1.618	40	3.725	1.535
Control SED#1	65	5.338	1.361	64	4.578	1.660	67	4.850	1.539	60	4.550	1.598
Control SED#2							61	4.786	1.674	66	4.424	1.559
Total	164			189			241			205		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	7.588	.01	0.041	NS	0.050	NS	8.127	.01
W/Control SED #1	Row	6.884	.01	5.835	.05	3.393	NS	4.247	.05
Experimental SED#1	Col.					0.137	NS		
W/Control SED #2	Row					5.146	.05		
Experimental SED#2	Col.	19.600	.01	3.127	NS	5.573	.05	25.046	.001
W/Control SED #1	Row	6.037	.05	5.235	.05	7.498	.01	8.704	.01
Experimental SED#2	Col.					6.035	.05		
W/Control SED #2	Row					5.144	.05		

Item 6 My manager shows confidence and trust in me.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	6.282	0.759	73	6.178	1.109	68	6.058	0.975	40	5.975	1.187
Experimental SED#2	60	6.050	1.213	52	5.326	1.424	45	5.800	0.990	40	5.225	1.576
Control SED#1	65	6.200	1.018	62	5.758	1.237	67	5.850	1.018	61	5.622	1.253
Control SED#2							61	5.557	1.466	64	5.531	1.167
Total	164			187			241			205		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	3.656	NS	0.010	NS	1.126	NS	8.022	.01
W/Control SED #1	Row	3.092	NS	5.614	NS	3.639	NS	1.934	NS
Experimental SED#1	Col.					8.547	NS		
W/Control SED #2	Row					0.115	.01		
Experimental SED#2	Col.	13.516	.001	3.176	NS	5.659	.05	17.244	.001
W/Control SED #1	Row	3.363	NS	2.304	NS	1.768	NS	2.634	NS
Experimental SED#2	Col.					2.644	NS		
W/Control SED #2	Row					0.029	NS		

Item #1: Based on information I have received from my boss, I know if I am measuring up in my job.

Fall 1970 to Spring 1971

In all the states the mean scores on this item dropped between T1 and T2. No training effect was shown in State E1 although it was significantly different from Control 1 in the amount of feedback given by the manager.

State E2 showed a positive training effect. It differed from the Control State; though both states were declining on this item State E2 experienced less decline and a greater stabilization of opinion than did Control 1.

Spring 1971 to Fall 1971

No significant differences appeared here between State E1 and Control 1. State E2 did not change over time in comparison with Control 1 but continued to differ significantly from C1 in terms of the level of response to this item.

Fall 1971 to Spring 1972

There were no significant training effects during this period. No significant differences appeared between State E1 and Control 1, or between State E2 and Control 2. Significant differences between State E1 and Control 2 and between State E2 and Control 1 were registered during this period.

Fall 1970 to Spring 1972

An analysis over time indicates significant positive training effects in E1 and negative effects in E2.

State E1 experienced a significantly less rapid decline on this item than the Control State. Personnel in E1 received less feedback from their managers, but at a slower rate of decline than did organization members in Control 1.

State E2 staff experienced a lower rate of feedback at a rate of decline which was greater than that of Control 1. However, attitudes on this subject were increasingly stabilized in State E2, while they were growing more unstable in Control 1.

Item #2: My manager encourages and supports innovation.

Fall 1970 to Spring 1971

No effects attributable to training were produced in E2 during the pre/post-training periods. Very significant effects were recorded in E1. Both of the states were significantly different from the Control State in terms of the amount of encouragement and support given to innovation; support in these terms from managers in E1 was greater than encouragement given in the Control; support in E2 was less than that given in the Control.

Spring 1971 to Fall 1971

No training effects occurred in this period of time. State E1 and the control continued to be significantly different from each other, while this difference between E2 and the Control faded.

Fall 1971 to Spring 1972

There was no significant change in the support for innovation in E1 during Y2, although the difference between E1 and Control 1 continued. E1 was also significantly different from C2.

Significantly, negative training effects did occur in E2. In comparison with both Control groups, E2 personnel experienced a sharper decline in the degree of innovation supported by their managers.

Fall 1970 to Spring 1972

A T1-T4 comparison reveals a significantly negative effect of training in E2. Both E1 and E2 experienced weaker support for innovation and more instability concerning those attitudes in the Spring of 1972 than was true in the Fall of 1970, before training. In E1's case, the decline was less than that undergone by the Control State over the same period; therefore a positive effect was assigned. E2's negative effect came about as the result of its decline, much greater than the Control State's.

Item #3: Fall 1970 to Spring 1971

When Higher management's reactions to the problems that reach them are fair is assessed, no training effect was evinced in State E1. State E2 experienced a positive training effect, because more stabilization concerning attitudes toward higher management's reactions was seen there than in the Control State. Neither E1 nor E2 differed from the Control in strength of belief that top management's reactions were equitable.

Item #3: Spring 1971 to Fall 1971

It cannot fairly be argued that training had any effect, one way or the other, on the opinions that E1 or E2 held about the way top management dealt with organizational problems. Both remained relatively stable in their beliefs, although C1 was less favorably disposed toward its superiors than was E1. Managers in E1 and C1 reacted in the same way toward issues which came to their attention during this period.

Item #3: Fall 1971 to Spring 1972

E1 felt that higher management's reactions were fairer in their organization that C1 did although there was no difference between the Experimental States and Control States. In neither case did change occur between Fall 1971 and Spring 1972. However, C1 and C2 had a higher opinion of their management's handling of problems than did E2, and these changes over time were at significant levels. Reaction became more unfair in all three States between T3 and T4, but E2's downward trends were steeper than in either Control State. Therefore a negative effect of training was concluded.

Item #3: Fall 1970 to Spring 1972

No impact from the weeks spent learning planning processes and developing action plans was evident in E1 higher management's reactions to problems that reached them. The differences between E1 and C1 on this variable were insignificant. Those who responded in E2 sensed a growing inability of their managers adequately to attack educational/administrative questions; and yet the growth in C1 was greater. If we assume that the presence of AMA training in E2 and its corresponding relative absence in C1 made the difference in their development of management problem-solving skills, then the AMA program fostered a positive change in E2.

Item #4: Fall 1970 to Spring 1971

Data gathered before and after training on the extent to which My manager knows and understands the problems I face resulted in different training effects. In the case of E1, different effects meant no effect; managerial knowledge of subordinate problems did not change over time and was the same as found in C1. In E2, "different" implies negative effects. While both E2 and the Control State declined between the Fall of 1970 and the Spring of 1971, E2 declined faster than C1 and thus experienced a negative training effect. Significant differences between E2 and C1 were also observed.

Item #4: Spring 1971 to Fall 1971

E1 and C1 remained constant in their essential similarity; managers in E1 did not know any more or understand any more acutely than their counterparts in C1. Knowledge and understanding did increase (although not significantly) in E2 when compared to C1, but neither changed sufficiently over time to assume any effects of the AMA-induced planning process.

Item #4: Fall 1971 to Spring 1972

Training had a negative effect on E2 between Fall 1971 and Spring 1972. Managers in that Experimental State knew less and understood less clearly as a result of the Hamilton experience. Both E2 and C1 declined over this period but C1 did not decline as sharply as E2 despite the lack of AMA training in the Control State. E2 managers were more skilled in dealing with problems than those in C2, but neither changed in T3 to T4, so no effects are presumed.

Item #4: Fall 1970 to Spring 1972

The ability of managers in C1 to comprehend and handle developing organizational problems was not significantly different from the ability of those in E1. And, in fact, managerial competence to handle problems fell in both States between Fall 1970 and Spring 1972. Since the rate of negative change was slower in E1, we can attribute positive effects to AMA training. The opposite occurred in E2, since its scores fell more than those of C1, and this constituted a negative training effect.

Item #5: Fall 1970 to Spring 1971

The extent to which My manager recognizes when a problem is developing and does something constructive about it offers another variable related to leadership and organizational climate. Training produced changes and differences in both States. More managerial recognition existed in E2 before the training than after it, creating significant negative changes within the organization, a significant difference with C1, and a negative effect of AMA training. E1 also reported less recognition in a pre- and post-training comparison with C1, but C1's decline was greater, thus causing a positive effect in E1.

Item #5: Spring 1971 to Fall 1971

No training effects appeared during this period. Major differences continued between the States; their differences were the same as previously indicated with C1 showing more managerial recognition of problems than E2, but less than E1. No State changed enough over time for training to have any impact, positive or negative.

Item #5: Fall 1971 to Spring 1972

E1 did not significantly differ from C1 in their perception of organizational problem-solving skills, but E1 easily led C2 in this. On the other hand, E2 declined significantly between Fall 1971 and Spring 1972 and was much lower on this item than either Control State. Therefore, training had the effect of decreasing the degree to which managers in E2 could recognize and deal with emergent educational problems.

Item #5: Fall 1970 to Spring 1972

The effects we observed in E1 in an earlier period evinced some permanence. Our overall assessment concludes that, concerning this variable, AMA training had a positive effect on E1. The loss of management problem-solving skills in E1 was not nearly so great as in C1. The reverse occurred in E2, which declined much more quickly and steeply than the Control State. That a variable could perform this way in a State which had AMA training (as opposed to a State without training) indicates a negative effect (in E2) of being trained by AMA in the team planning process.

Item #6: Fall 1970 to Spring 1971

Item #6, My manager shows confidence and trust in me. There are no significant differences between E1 and the Control State when we compare what each said about this aspect of managerial relations before training and afterward. Training did have negative impact in E2; their managers were less confident after training about their subordinates' ability to get the job done; and the managers were losing this confidence faster than in the Control State.

Item #6: Spring 1971 to Fall 1971

No effects due to AMA training were observed in either State. No changes occurred over time and no differences appeared between E1 and C1, or between E2 and C1.

Item #6: Fall 1971 to Spring 1972

Between Fall 1971 and Spring 1972, E1 respondents believed their managers had a higher opinion of them than their counterparts in C1, but neither had changed much. An effect of training did take place in E2. In comparison with C1, E1 dropped faster and farther in terms of management confidence and trust. This significant downward movement is a negative training effect.

Item #6: Fall 1970 to Spring 1972

A comparison of pre- and post-training results on this item in both Experimental States reveals opposite training effects. E1, E2, and C1 all indicated less expressed managerial confidence and trust in Spring 1972 than in Fall 1970. Whereas the decline in C1 was faster than in E1, it was slower than in E2. Without training, we assume that all declines would have been similar; likewise we assume that, with training, decline in an Experimental State would be matched by greater decline in the Control State. That this held true for E1 is a positive effect. That it proved false for E2 is a negative impact.

DATA SUMMARY

Leadership Climate

Fall, 1970 - Spring, 1972

Item	Type of Data QUESTIONNAIRE	IMPACT OF TRAINING Positive Effect	No Effect	Negative Effect
1	Based on information I have received from my boss, I know if I am measuring up in my job.	E1		E2
2	My manager encourages and supports innovation.	E1		E2
3	Higher management's reactions to the problems which reach them are fair.	E2	E1	
4	My manager knows and understands the problems I face.	E1		E2
5	My manager recognizes when a problem is developing and does something constructive about it.	E1		E2
6	My manager shows confidence and trust in me.	E1		E2

Even a casual reading of the data summary reveals the AMA program significantly influenced leadership climates in the Experimental States. With one exception, training effects were observed on every questionnaire item. And it is also clear that the States were affected in opposite ways.

The leadership climate in E1 was improved largely by the AMA intervention. As far as our instruments were able to measure, E1 made the team planning process less a slogan and more genuinely an institutional reality. Positive training effects were recorded on all but one of the items used to assess the managerial environment. The educational managers of E1 were apparently viewed by their administrative subordinates as improved information providers and supporters of innovation; as understanding managers, problem solvers; and as superiors who seemed to trust and confide in subordinates. Only in their immediate reaction to problems did managers exhibit no movement in either direction.

The situation was reversed in E2. The AMA program caused serious deleterious consequences for that organization's leadership climate. In the same items where E1 had experienced positive effects, E2 amassed negative effects. The single exception was in their responses to problems that reached them; persons in E2 felt that managerial responses had become fairer after training. But in all other areas, the AMA program hurt more than it helped.

This is not to suggest that the positive effects imply an improved climate in E1; or that the negative assessment in E2 should automatically be interpreted to mean that this Experimental State was the only one to show a decline. On the contrary, both Experimental States (and the Control State) had lower mean scores after training than before. Effects of training were assigned on the legitimate basis that one Experimental State (E1) had declined more slowly than the Control State, while the other State (E2) had fallen much faster. Methodologically, we assumed that if the states had not been trained, the Experimental States would have performed somewhat similarly to the Control State. To the extent they did not, the disparity was defined as an effect of training.

B. Decisionmaking

The analysis of decisionmaking is based on three content analysis items and three questionnaire items.

1. Involvement in Decisionmaking in the State Department:

Interview Question: How are major decisions made in the State Department?

Range of Scale Possibilities: (1) no participation/no discussion invited, to (7) maximum participation throughout SED.

Points of Time: T1, T2, T3, T4.

States: E1, E2, C1.

2. Quality of Decisionmaking in the State Department.

Interview Question: Same as #1 above.

Range of Scale Possibilities: (1) never effective to (7) highly effective.

Points of Time: T1, T2, T3, T4.

States: E1, E2, C1.

3. Influence of Planning on decisionmaking process.

Interview Question: Is planning influencing the decisionmaking process within the State Department of Education?

Range of Scale Possibilities: (1) no influence to (7) integral part of decisionmaking process.

Points of Time: T3, T4.

States: E1, E2, C1.

The questionnaire items are:

4. The people I work with participate appropriately in setting the goals of our work.

Points of Time: T1, T2, T3, T4.

5. I am appropriately involved in decisions affecting my work.

Points of Time: T1, T2, T3, T4.

6. I can influence the goals, methods, and activities of my organization.

Points of Time: T3, T4.

Item 1 Involvement in Decision-Making in the State Department.

Fall, 1970						Spring, 1971						Fall, 1971					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 12	N 12	N 12	N 12	N 12	N 12	N 11	N 11	N 12	N 11	N 11	N 12	N 9	N 10	N 10	N 10	N 9	N 10

Kruskal-Wallis One-Way Analysis of Variance

H=4.813	H=1.470	H= 1.333	H=8.928	H=2.367	H= 5.186	H=6.826	H=0.022	H= 6.826
Sig.=.05	Sig.= NS	Sig.=NS	Sig.=.01	Sig.= NS	Sig.=.05	Sig.=.01	Sig.= NS	Sig.=.02

Spring, 1972						Fall, 1970 To Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & E_1		E_2 & E_2		C_1 & C_1	
N 8	N 11	N 9	N 11	N 8	N 9	N 12	N 8	N 12	N 9	N 12	N 11

Kruskal-Wallis One-Way Analysis of Variance

H=9.334	H=1.131	H= 7.259	H=2.037	H=1.213	H= 1.160
Sig.= .01	Sig.=NS	Sig.=.01	Sig.= NS	Sig.= NS	Sig.=NS

Item 2 Quality of Decision-Making in the State Department.

<table>
<tr><th colspan="6">Fall, 1970</th><th colspan="6">Spring, 1971</th><th colspan="6">Fall, 1971</th></tr>
<tr><th colspan="2">E_1 & C_1</th><th colspan="2">E_2 & C_1</th><th colspan="2">E_1 & E_2</th><th colspan="2">E_1 & C_1</th><th colspan="2">E_2 & C_1</th><th colspan="2">E_1 & E_2</th><th colspan="2">E_1 & C_1</th><th colspan="2">E_2 & C_1</th><th colspan="2">E_1 & E_2</th></tr>
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<tr><td colspan="18">Kruskal-Wallis One-Way Analysis of Variance</td></tr>
<tr><td colspan="2">H=1.141</td><td colspan="2">H= 6.901</td><td colspan="2">H= 1.763</td><td colspan="2">H=1.246</td><td colspan="2">H=9.660</td><td colspan="2">H= 5.327</td><td colspan="2">H=8.750</td><td colspan="2">H= 0.563</td><td colspan="2">H= 8.750</td></tr>
<tr><td colspan="2">Sig.= NS</td><td colspan="2">Sig.= .01</td><td colspan="2">Sig.=NS</td><td colspan="2">Sig.= NS</td><td colspan="2">Sig.= .01</td><td colspan="2">Sig.=.05</td><td colspan="2">Sig.= .01</td><td colspan="2">Sig.=NS</td><td colspan="2">Sig.=.01</td></tr>
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<table>
<tr><th colspan="6">Spring, 1972</th><th colspan="6">Fall, 1970 To Spring, 1972</th></tr>
<tr><th colspan="2">E_1 & C_1</th><th colspan="2">E_2 & C_1</th><th colspan="2">E_1 & E_2</th><th colspan="2">E_1 & E_1</th><th colspan="2">E_2 & E_2</th><th colspan="2">C_1 & C_1</th></tr>
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<tr><td colspan="12">Kruskal-Wallis One-Way Analysis of Variance</td></tr>
<tr><td colspan="2">H= 4.854</td><td colspan="2">H=0.763</td><td colspan="2">H=7.253</td><td colspan="2">H=0.789</td><td colspan="2">H=1.823</td><td colspan="2">H=5.761</td></tr>
<tr><td colspan="2">Sig.=.05</td><td colspan="2">Sig.= NS</td><td colspan="2">Sig.= .01</td><td colspan="2">Sig.=NS</td><td colspan="2">Sig.= NS</td><td colspan="2">Sig.= .02</td></tr>
</table>

Item 3 : Influence of Planning on Decision-Making Process

Fall, 1971						Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 9	N 11	N 10	N 11	N 9	N 11	N 9	N 11	N 10	N 11	N 9	N 10

Kruskal-Wallis One-Way Analysis of Variance

H=11.430 Sig.= .001	H= 0.447 Sig.= NS	H=11.430 Sig.= .001	H=10.922 Sig.=.001	H=1.433 Sig.= NS	H= 2.940 Sig.= NS

Binomial Test of Proportions

P=1.000 Sig.= NS	P=1.000 Sig.=NS	P=1.000 Sig.= NS	P=1.000 Sig.= NS	P= 1.000 Sig.= NS	P=1.000 Sig.= NS

Fall, 1971, to Spring, 1972					
E_1 & E_1		E_2 & E_2		C_1 & C_1	
N 9	N 9	N 10	N 10	N 8	N 10

Kruskal-Wallis One-Way Analysis of Variance

H=0.048 Sig.= NS	H= 1.120 Sig.= NS	H= 0.000 Sig.=NS

Binomial Test of Proportions

P=1.000 Sig.= NS	P= 1.000 Sig.= NS	P= 0.030 Sig.=.05

Item 4 The people I work with participate appropriately in setting the goals of our work.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.769	0.931	72	5.375	1.305	68	5.485	1.099	40	5.250	1.103
Experimental SED#2	60	5.167	1.460	51	4.804	1.342	45	4.822	1.481	39	4.384	1.515
Control SED#1	66	5.394	1.288	60	4.817	1.568	67	4.970	1.313	59	4.661	1.372
Control SED#2							61	4.918	1.429	66	4.696	1.303
Total	165			183			241			204		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental SED#1 W/Control SED #1	Col.	7.002	.01	0.700	NS	2.708	NS	12.471	.001
	Row	7.582	.01	11.138	.001	11.139	.001	7.653	.01
Experimental SED#1 W/Control SED #2	Col.					1.870	NS		
	Row					11.270	.001		
Experimental SED#2 W/Control SED #1	Col.	0.844	NS	0.215	NS	3.539	NS	13.495	.001
	Row	5.154	.05	0.158	NS	1.142	NS	2.412	NS
Experimental SED#2 W/Control SED #2	Col.					2.716	NS		
	Row					1.043	NS		

Item 5 I am appropriately involved in decisions affecting my work.

	Fall, 1970			Spring, 1971			Fall, 1971			Spring, 1972		
	T1			T2			T3			T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.949	0.887	73	5.699	1.298	68	5.441	1.428	40	5.575	0.984
Experimental SED#2	59	5.661	1.385	52	4.808	1.456	45	5.177	1.336	40	4.950	1.466
Control SED#1	66	5.879	1.117	61	5.082	1.452	67	5.298	1.314	61	4.950	1.553
Control SED#2							61	5.147	1.525	66	4.984	1.430
Total	164			186			241			207		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	4.355	.05	0.012	NS	0.344	NS	14.408	.001
W/Control SED #1	Row	10.125	.01	5.287	.05	4.431	.05	3.858	.05
Experimental SED#1	Col.					0.006	NS		
W/Control SED #2	Row					5.662	.05		
Experimental SED#2	Col.	1.959	NS	2.526	NS	2.091	NS	19.479	.001
W/Control SED #1	Row	22.038	.001	1.108	NS	0.933	NS	0.384	NS
Experimental SED#2	Col.					0.925	NS		
W/Control SED #2	Row					0.000	NS		

Item 6 I can influence the goals, methods, and activities of my organization.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.220	1.433	40	5.175	1.009
Experimental SED#2	45	4.577	1.469	40	4.300	1.471
Control SED #1	67	4.731	1.343	61	4.557	1.554
Control SED #2	61	4.770	1.531	66	4.545	1.458
Total	241			207		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED #1	Col.	0.356	NS
W/Control SED #1	Row	9.060	.01
Experimental SED #1	Col.	0.520	NS
w/Control SED # 2	Row	8.276	.01
Experimental SED #2	Col.	1.224	NS
w/Control SED #1	Row	1.013	NS
Experimental SED #2	Col.	1.807	NS
w/Control SED #2	Row	0.972	NS

Analysis of Item #1 showed that the AMA training had no effect on top administrators' feeling of involvement in major organizational decisions; neither E1, E2, or C1 experienced any change between Fall 1970 and Spring 1972.

Prior to training, persons in E1 felt more involved than their counterparts in C1. If we examine the three post-training periods, E1 perceived its decisionmaking process to be more participative than either E2 or C1; the same differences occurred in Spring 1971, Fall 1971 and Spring 1972. As far as E1 itself was concerned, however, no significant changes occurred during the two-year period.

No significant differences in awareness of the decisionmaking process appeared between any of the states. While E2 somewhat decreased in awareness over time (Fall 1970 to Spring 1972), E1 and C1 remained essentially the same.

There were no differences in awareness of Item #2, Quality of Decisionmaking in the State Department, between the states, nor did any state change over time.

Prior to training, no differences appeared in emphasizing this item between E1 and C1 and E1 and E2; but C1 perceived a higher quality of decisionmaking than E2. However, after training, significant differences began to appear. E1 attributed greater effectiveness to their organizational decisions than E2 attributed to theirs. More importantly, E1 felt better about their effectiveness than did C1 (in Fall 1971 and Spring 1972) while the pre-training advantage of C1 over E2 became insignificant (in Fall 1971 and Spring 1972).

The explanation for this development is clear. For the period Fall 1970 to Spring 1972, neither Experimental State indicated a change in the effectiveness of the decisionmaking process as a result of training. The key to the relative positions of E1, E2, and C1 is that C1 dropped during the same time. All other things being equal, we can conclude that, without training, the Experimental States would have undergone a similar decrease in perceived effectiveness. Thus training had a positive effect in E1 and E2 because it stabilized the quality of their decisionmaking process, while C1 declined.

Item #3, Influence of Planning on decisionmaking process, is an addition to the Y2 research design. Overall, E1 felt that planning had more influence on their decisionmaking process than did E2 or C1. Yet E1, E2, and C2 did not change in the influence they perceived that planning exerted in their organizations.

Both Experimental States and the Control State showed similar levels of awareness of planning's influence, although C1 increased its awareness over time. Possibly this may be attributed to the fact that the Spring 1972 interviews were conducted after C1 entered AMA training.

Because the question was not asked prior to training, we must be careful about judgments regarding the impact of the AMA program on the influence of planning over the E1 or E2 decisionmaking process. Nevertheless, since no significant change occurred in any State between T3 and T4, we conclude that training had virtually no effect on E1 and E2.

Item #4: Fall 1970 to Spring 1971

Item #4 is The people I work with participate appropriately in setting the goals of our work. For the immediate pre/post-training period, it showed mixed effects. Training had the effect of increasing participation in decisionmaking in E1; it had no effect in E2. Both Experimental States differed from the Control State in the amount of participation that was possible within the organization. There was greater participation in E1 than in the Control State, and less participation in E2.

Item #4: Spring 1971 to Fall 1971

Both Experimental States experienced a drop in participation and no training effects during this period. Persons in E1 did feel more involved in decisionmaking than those in C1, while E2 felt less involved. But neither E1 or E2 changed significantly between Spring 1971 and Fall 1971.

Item #4: Fall 1971 to Spring 1972

The extent to which people felt involved in goal setting was not affected by AMA training on this item. C1 and C2 reported significantly less participation than E1, while no differences showed between E2 and the Control States. The amount of participation continued to decline in both Experimental States but not enough to render the change significant in either case.

Item #4: Fall 1970 to Spring 1972

The overall impact of AMA training on the Experimental States can be assessed by comparing the degree of involvement felt by E1 and E2 in the Fall of 1970, with how they felt in the Spring of 1972. Analysis of E1 with C1 indicates that training had a positive effect in E1; the extent to which persons in that organization participated in decisions relating to their work did decline over the four periods, but the rate of decline was sharper in the Control State and significant differences existed between them. Involvement in E2 also declined but no significant difference existed when compared with C1. The rate of decline was greater in E2 than in C1; thus negative training effects occurred in E2.

Item #5: Fall 1970 to Spring 1971

Item #5, I am appropriately involved in decisions affecting my work, reflected the same relationships as the previous item. A significant increase, a training effect, was registered in the way individuals were involved in decisions in E1. Training had no effect in E2. Experimental State E2 differed from the Control State in the amount of involvement individuals felt they had in decisions affecting their owrk; greater involvement existed in the Experimental States. Organization E2 also differed from the Control State by demonstrating less involvement.

Item #5: Spring 1971 to Fall 1971

During this period no change of either greater or lesser involvement occurred in either E1 or E2. Organization E1 allowed significantly more individual participation in decisions affecting jobs than did the Control. No difference existed between E2 and the Control State.

Item #5: Fall 1971 to Spring 1972

Organization E1 and both Control States permitted significantly different levels of involvement; this difference was due to the fact that persons in the Experimental State felt more involved than their counterparts in either C1 or C2. No difference existed between E2 and the Control States. E1 and E2 did not change between Spring and Fall 1971.

Item #5: Fall 1970 to Spring 1972

For slightly different reasons, AMA training had a positive effect in both States. Declining levels of participation characterized E1 and E2 during this period; however, neither declined as fast as C1. E1 considered its decision-making process to be more participative than C1, while E2 viewed itself as less participative although not significantly less so. E2 was also more stable than C1.

Item #6: Fall 1971 to Spring 1972

Item #6: I can influence the goals, methods, and activities of my organization. Comparison was made on this item between two Experimental States and two Control States over two points in time. Analysis reveals that all four organizations believed they could influence their goals, methods, and activities less in the Spring of 1972 than in the Fall of 1971. C1 declined a little more sharply than did E1 but both changed less than E2 or C2. C1 and C2 felt less influence than E1, but more than E2.

DATA SUMMARY

Decisionmaking

Fall, 1970-Spring, 1972

Item	Type of Data CONTENT	IMPACT OF TRAINING Positive Effect	No Effect	Negative Effect
1	Involvement in Decisionmaking in the State Department		E1,E2	
2	Quality of Decisionmaking in the State Department	E1,E2		
3	Influence of Planning on decisionmaking process		E1,E2	
	QUESTIONNAIRE			
4	The people I work with participate appropriately in setting the goals of our work.	E1		E2
5	I am appropriately involved in decisions affecting my work.	E1,E2		
6	I can influence the goals, methods, and activities of my organization.		E1,E2	

Analysis of the interview material obtained from top administrators showed no effects of training on involvement in major organizational decisions or in planning's influence on decisionmaking. Negative training effects are indicated for the quality of decisionmaking; both Experimental

States felt their decisionmaking processes had grown less effective between Fall 1970 and Spring 1972.

The larger sample provided by the questionnaire items revealed mixed training effects. Training increased the degree of participation that some individuals believed others enjoyed in setting E1's work goals, but decreased the degree of this belief in E2. The extent to which these individuals in E1 and E2 felt involved in decisions affecting their own work was enhanced by the AMA program. However, no training effects were observed on their perceived influence over the operations of the entire department; it remained about the same before and after training in both States.

Overall, AMA training showed positive effects on two items relating to decisionmaking, and no effects on three others. Only in one State on a single item did negative effects of training appear.

As with the items testing leadership climate, however, this result did not demonstrate absolute changes in a positive direction. The gross scores on the questionnaires indicated that the decisionmaking process declined in perceived effectiveness in both States over time. Yet this apparently straightforward index of training effects is perhaps too simple and straightforward. For the best comparisons are drawn not within one State, or between two Experimental States, but between Experimental States that receive training and Control States that lack training.

Further, relative to the Control States on some items, the descent was slower for the Experimental State; on others it was faster. This rationale is most proper for our analysis, and it is the basis on which training effects were frequently determined.

C. Management Team Relations

Six items will be utilized - two content categories and five questionnaire items. Content categories:

1. Promote cooperative teamwork

Interview Question: What do you think you will obtain (have obtained) from the AMA training?

Range of Scale Possibilities: (1) no value to (7) maximum value.

Points of Time: T1, T2, T3, T4.

States: E1, E2, C1.

2. Amount of cooperative teamwork present

   Interview Question: What are some of the roadblocks to organizational change?

   Range of Scale Possibilities: Major roadblock/always stops change, to (7) weak roadblock/seldom stops change.

   Points of Time: T1, T2, T3, T4.

   States: E1, E2, C1.

The questionnaire items are as follows, and all items are from Points of Time T1, T2, T3, and T4.

3. My group works hard to achieve its goals.
4. My work group understands what we are trying to achieve.
5. I feel my group works well together.
6. I really feel my immediate work group is getting things done.
7. When differences arise in my work group, we have good ways for settling them ourselves.

Item 1 : Promote Cooperative Team Work

Fall, 1970		Spring, 1971		Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2		E_1 & E_2		E_1 & E_2	
N 8	N 7	N 11	N 10	N 7	N 7	N 8	N 7

Kruskal-Wallis One-Way Analysis of Variance

H= 1.477 Sig.= NS	H= 5.565 Sig.= .05	H= 0.200 Sig.= NS	H= 10.500 Sig.= .01

Binomial Test of Proportions

P=0.736 Sig.= NS	P=0.528 Sig.= NS	P=0.426 Sig.= NS	P=0.180 Sig.= NS

Fall 1970 to Spring 1972			
E_1 & E_1		E_2 & E_2	
N 8	N 8	N 7	N 7

Kruskal-Wallis One-Way Analysis of Variance

H= 2.318 Sig.= NS	H= 9.800 Sig.= .01

Binomial Test of Proportions

P= 0.02 Sig.= .05	P= 0.141 Sig.= NS

Item 2 : Amount of Cooperative Teamwork Present

Fall, 1970						Spring, 1971						Fall, 1971					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 7	N 5	N 8	N 5	N 7	N 8	N 11	N 7	N 10	N 7	N 11	N 10	N 5	N 4	N 8	N 4	N 5	N 8
Kruskal-Wallis One-Way Analysis of Variance																	
H=0.059 Sig.=NS		H= 0.771 Sig.=NS		H=1.929 Sig.= NS		H= 0.051 Sig.=NS		H= 0.153 Sig.= NS		H=0.011 Sig.=NS		H= 1.215 Sig.= NS		H= 0.007 Sig.= NS		H=0.535 Sig.=NS	
Binomial Test of Proportions																	
P=0.189 Sig.= NS		P= 0.020 Sig.=.05		P=0.736 Sig.= NS		P=0.001 Sig.=.001		P= 0.010 Sig.= .01		P=0.528 Sig.=NS		P=0.064 Sig.=NS		P=0.0007 Sig.=.001		P=0.170 Sig.= NS	

Spring, 1972						Fall, 1970 to Spring 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & E_1		E_2 & E_2		C_1 & C_1	
N 4	N 2	N 8	N 2	N 4	N 8	N 7	N 4	N 8	N 8	N 5	N 2
Kruskal-Wallis One-Way Analysis of Variance											
H= 0.000 Sig.= NS		H=2.062 Sig.=NS		H= 3.490 Sig.= NS		H=4.321 Sig.= .05		H= 0.466 Sig.= NS		H=0.337 Sig.= NS	
Binomial Test of Proportions											
P=0.026 Sig.= .05		P= 0.000 002 Sig.=.001		P=0.028 Sig.=.05		P= 0.302 Sig,=NS		P=0.104 Sig.=NS		P=0.012 Sig.= .05	

Item 3 My group works hard to achieve its goals.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	6.128	0.656	73	5.932	0.855	68	5.955	1.125	40	5.675	1.071
Experimental SED#2	60	5.634	1.149	52	5.538	1.019	45	5.711	1.057	39	5.179	1.048
Control SED#1	66	6.091	0.956	60	5.600	1.417	67	5.776	1.112	60	5.533	1.185
Control SED#2							61	5.721	1.127	66	5.651	0.952
Total	165			185			241			205		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	1.812	NS	0.436	NS	3.019	NS	12.175	.001
W/Control SED #1	Row	6.298	.05	3.213	NS	1.137	NS	0.374	NS
Experimental SED#1	Col.					1.505	NS		
W/Control SED #2	Row					0.815	NS		
Experimental SED#2	Col.	3.016	NS	1.101	NS	6.113	.05	11.581	.001
W/Control SED #1	Row	3.841	.05	0.214	NS	1.788	NS	7.459	.01
Experimental SED#2	Col.					4.167	.05		
W/Control SED #2	Row					2.679	NS		

Item 4 My work group understands what we are trying to achieve.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.667	0.898	73	5.562	0.928	68	5.808	1.136	40	5.600	1.172
Experimental SED#2	60	5.317	1.172	49	5.143	1.208	45	5.400	1.194	39	4.769	1.180
Control SED#1	66	5.727	1.075	61	5.164	1.306	67	5.492	1.064	61	5.196	1.166
Control SED#2							61	5.573	1.296	66	5.363	1.223
Total	165			183			241			206		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	1.395	NS	4.384	.05	2.805	NS	3.399	NS
W/Control SED #1	Row	5.483	.05	6.777	.01	5.704	.05	1.337	NS
Experimental SED#1	Col.					1.682	NS		
W/Control SED #2	Row					2.129	NS		
Experimental SED#2	Col.	1.918	NS	3.164	NS	8.288	.01	11.563	.001
W/Control SED #1	Row	5.594	.05	0.140	NS	2.610	NS	6.915	.01
Experimental SED#2	Col.					5.872	.05		
W/Control SED #2	Row					4.900	.05		

Item 5 I feel my group works well together.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.794	0.863	73	5.575	0.998	68	5.897	1.108	39	5.589	1.207
Experimental SED#2	59	5.271	1.215	51	4.862	1.311	45	5.222	1.520	39	4.871	1.281
Control SED#1	65	5.738	1.162	64	5.187	1.166	67	5.597	1.279	61	5.295	1.358
Control SED#2							61	5.344	1.515	66	5.151	1.315
Total	163			188			241			205		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	7.339	.01	6.984	.01	3.355	NS	3.603	NS
W/Control SED #1	Row	2.439	NS	6.181	.05	3.197	NS	1.056	NS
Experimental SED#1	Col.					2.062	NS		
W/Control SED #2	Row					8.098	.01		
Experimental SED#2	Col.	9.306	.01	4.773	.05	2.919	NS	6.085	.05
W/Control SED #1	Row	6.342	.05	3.450	.05	4.369	.05	6.795	.01
Experimental SED#2	Col.					1.855	NS		
W/Control SED #2	Row					1.015	NS		

Item 6 I really feel my immediate work group is getting things done.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.897	0.882	73	5.904	0.915	68	5.882	1.015	40	5.600	0.928
Experimental SED#2	60	5.800	1.021	52	5.384	1.239	45	5.622	1.192	39	5.153	1.386
Control SED#1	65	5.830	1.024	64	5.546	1.344	67	5.656	1.135	60	5.400	1.237
Control SED#2							61	5.590	1.070	65	5.415	1.102
Total	164			189			241			204		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1 W/Control SED #1	Col.	0.955	NS	0.107	NS	3.384	NS	5.810	.05
	Row	2.234	NS	4.703	.05	2.110	NS	0.779	NS
Experimental SED#1 W/Control SED #2	Col.					2.698	NS		
	Row					2.935	NS		
Experimental SED#2 W/Control SED #1	Col.	5.397	.05	1.105	NS	4.402	.05	11.742	.001
	Row	0.411	NS	0.354	NS	0.659	NS	0.776	NS
Experimental SED#2 W/Control SED #2	Col.					3.791	NS		
	Row					0.482	NS		

Item 7 When differences arise in my work group, we have good ways for settling them ourselves.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.717	0.971	73	5.534	0.929	68	5.529	1.190	39	5.205	1.379
Experimental SED#2	60	5.300	1.356	51	4.921	1.453	45	4.800	1.492	40	4.750	1.409
Control SED#1	65	5.676	1.047	64	5.265	1.287	67	5.268	1.354	60	4.950	1.358
Control SED#2							61	5.098	1.457	66	5.090	1.285
Total	164			188			241			205		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	4.372	.05	0.000	NS	3.326	NS	12.774	NS
W/Control SED #1	Row	1.184	NS	3.328	NS	2.141	NS	0.728	NS
Experimental SED#1	Col.					0.875	NS		
W/Control SED #2	Row					2.365	NS		
Experimental SED#2	Col.	5.623	.05	0.047	NS	2.104	NS	13.386	.001
W/Control SED #1	Row	4.687	.05	2.694	NS	1.429	NS	2.732	NS
Experimental SED#2	Col.					0.426	NS		
W/Control SED #2	Row					1.241	NS		

Promote cooperative teamwork, Item #1, was a content category applied only to organizations E1 and E2. It indicated no difference in emphasis between the States prior to training. In the post-training periods, E1 believed the program promoted cooperative teamwork more than did E2 on two occasions: Spring 1971 and Spring 1972, with the disparity greater in the latter period. Concerning changes in emphasis over time, E1 reported no significant changes, while E2 revealed an overall decline in the belief that the promotion of cooperative teamwork was due to their AMA training.

No differences appeared between the States in their awareness of this issue. However, E1's awareness of training's effects on encouraging cooperative teamwork significantly increased between Fall 1970 and Spring 1972.

The second Content category, Amount of cooperative teamwork present (one of the possible roadblocks to organizational change), showed no differences between the States before or after training. Assessing changes within the States over time, training showed an impact on E1, in that E1 considered that the degree of cooperative teamwork presented a smaller roadblock after training than before; no measurable changes occurred in E2 or C1.

Awareness of this variable was not significantly different in E1 as compared to E2 or C1 before the training. However, E2 was more aware of cooperative teamwork as a roadblock than C1. In the post-training periods, five points of significant differences in awareness appeared: Both E1 and E2 grew more sensitive to this variable than C1 in Spring 1971. Fall 1971 indicated a continuing difference, with E2 more aware of the presence of this roadblock than C1; and E2's awareness was greater than either E1 or C1 during Spring 1972. There were no changes in awareness over time in either E1 or E2, but C1 was less aware of cooperative teamwork constituting an obstacle in Spring 1972 than they had been in Fall 1970.

Item #3: Fall 1970 to Spring 1971

Item #3, My group works hard to achieve its goals, showed no effect of training in either Experimental State. In terms of how strenuously the groups were described as working, differences appeared between both E1 and E2 in relation to the Control. Organization E1 indicated that its groups worked harder than did the Control's; E2's work group described itself as working less energetically than the Control group's description of itself.

Item #3: Spring 1971 to Fall 1971

No effects attributable to training occurred in either Experimental State during 1971. E1 thought their work group worked as hard as those in the Control State and retained this feeling over time; this relationship also characterized the E2/C1 comparison. Neither changed, nor did they differ from the Control State.

Item #3: Fall 1971 to Spring 1972

E1 maintained its close proximity with C1 (as well as C2) on how it viewed goal-directed behavior. Neither had revised its opinions up or down since the Fall of 1971. However, training effects were evident in E2; these effects were negative. All States thought their groups did not work so well in the Spring as they had in the Fall; but E2's decline was more pronounced than either C1 or C2. So the effect of training on E2, at least during this period, was to weaken this organization's efforts to attain educational goals.

Item #3: Fall 1970 to Spring 1972

When we compare pre- and post-training responses to this item, we find that the AMA was able to have an overall positive influence over E1 and E2. Persons in those States reported significantly lower goal-directed activity in the Spring of 1972 then they had before training began in the Fall of 1970. However, as has been the case before, C1's work had decreased at a faster rate. According to the logic of the research design, we can assume that E1 and E2's performance losses would have been at least as great as C1's without AMA training, so this represents a positive effect.

Item #4: Fall 1970 to Spring 1971

Item #4, a questionnaire item, My work group understands what we are trying to achieve, reflected no effects attributable to training for either of the Experimental States during the Fall 1970 to Spring 1971 period. Both Experimental States differed from the Control State in the degree of emphasis given to the item, however. Significantly greater understanding existed in E1 than in the Control, and significantly less comprehension showed in E2 than in the Control.

Item #4: Spring 1971 to Fall 1971

E2 had not changed its comprehension of what was expected, nor did they differ in this regard from C1.

AMA training did prove helpful to E1 during this period. While persons in that organization understood less than previously indicated, this loss was not as great as the Control State's, and a significant difference did show between them. This, therefore, is a positive effect of training.

Item #4: Fall 1971 to Spring 1972

In E1, training did not increase work-group understanding of the ends to which their activities were directed. Comparing E1 to C1 and C2, none had undergone major changes between the Fall of 1971 and the Spring of 1972, although E1 remained significantly higher than C1 in what they knew about their goals. E2 felt less certain about this organizational variable in Spring 1972 than had been the case in Fall 1971. Also, E2's understanding was declining faster than the awareness of either Control State.

Item #4: Fall 1970 to Spring 1972

Looking at the effects of training from the perspective of 18 months (Fall 1970 to Spring 1972) reveals that it had no effect in E1 and negative effects in E2. E1's understanding of group performance objectives did not appreciably change after training nor did they differ from the Control State, which had not received as much planning theory and practice from the AMA. The negative impact on E2 is the result of C1's decrease in this area being not as great as the decline which occurred in this Experimental State. Significant differences also appeared between E2 and C1; the latter knew more about what they were trying to achieve than the former.

Item #5: Fall 1970 to Spring 1971

Positive effects can be attributed to AMA training as far as Item #5, I feel my group works well together, is concerned. Neither E1 nor E2 felt the groups worked as well together after training as their pre-training expectations had promised. However, this gap between promise and performance was more than equaled in the Control State, resulting in positive effects in both Experimental States.

Item #5: Spring 1971 to Fall 1971

Groups got along together even better in E1 and E2 on a T2-T3 comparison--but with negative results. Relative to C1, both experienced negative effects of training. For although the Experimental States had improved their group relations, the Control State, without any AMA training, had improved theirs even more. This slower rate of improvement in E1 and E2 can be attributed to AMA training.

Item #5: Fall 1971 to Spring 1972

The positive/negative effects cycle apparent in the two previous periods did not continue into this one. Significant differences in the levels of intra-group cooperation were recorded between E1 and C2 as well as between E2 and C1. In each case the relationship between the Experimental State and the Control State differed. Groups did not work as well in C2 as they did in E1, but those in C2 got along better than those in E2. These differences were not due to either State changing its work patterns, but merely to continuing the old patterns. Under this condition, we can attribute no effects to training.

Item #5: Fall 1970 to Spring 1972

A comparison of group relations in each Experimental State between Fall 1970 (pre-training) and Spring 1972 (post-training) provides an overall evaluation of the effects of AMA training. The positive or negative effects associated with this item in E1 in the past faded over time. Consequently, no differences existed between E1 and C1 or between E1 before training and E1 after training. Groups work together less well in E2 than in C1; yet relations in both of these States have deteriorated since training concluded. But assuming that E2 would have experienced a loss as severe as C1 had they not gone through the AMA team planning process, a positive effect of training can be assumed in E2, at least on this aspect of organizational cooperation.

Item #6: Fall 1970 to Spring 1971

Item #6, I really feel my immediate work group is getting things done, refers to how effective the smallest organizational units see themselves to be in accomplishing what they consider worthwhile educational goals. Apparently, training did not affect the performance of E1, for when we compare them to C1 no differences or changes can be ascribed to Hamilton. There is a significant difference and a negative effect in E2. That E2 was able to accomplish less after training than before was significant.

Item #6: Spring 1971 to Fall 1971

AMA training had no influence either way on either Experimental State between Spring and Fall 1971. Work groups in E1 and E2 did not perform better as a result of training, although E1 had much higher performance levels than the Control State.

Item #6: Fall 1971 to Spring 1972

E1 did not change their effectiveness during this period. In this they resembled C1 and the Control State added for this analysis alone (C2). Such an absence of any differences over time or between the States makes it unlikely that AMA training had any impact on this Experimental State. E2 was not so fortunate; training hurt their effectiveness during this year. As for accomplishment, E2 did less between Fall 1971 and Spring 1972. This downward trend was the same in C1 but the rate of descent was slower even though C1 lacked as much exposure to the AMA planning process.

Item #6: Fall 1970 to Spring 1972

No differences existed between C1 and either Experimental State. Performance at comparable levels was shown in both sets of comparisons. Nevertheless, the accomplishments of these organizations between Fall 1970 and Spring 1972 had changed; in all cases the change represented a net loss in effectiveness. But while absolute levels declined in the States, the speed at which they lost their ability to get things done differed. The C1 comparison demonstrates a positive effect of training in E1 and a negative effect in E2. Training enabled E1 to slow its descent in relation to C1, but training influenced E2 to accomplish less at a faster rate than the Control State.

Item #7: Fall 1970 to Spring 1971

Item #7, When differences arise in my work group, we have good ways for settling them ourselves, is an index of group effectiveness in resolving conflict. E2 is less proficient at settling conflict than the Control State, while E1, E2 and C1 all were better at settling disagreement before training. With training, however, E1 and E2 got worse at a slower rate than C1 did without training. Both Experimental States were thus affected positively by their AMA experience.

Item #7: Spring 1971 to Fall 1971

No changes occurred in 1971 in the Experimental States' ability to resolve conflict within their work group. They were also not significantly different than the Control State. AMA, therefore, had done nothing for (or to) any State during this period.

Item #7: Fall 1971 to Spring 1972

Here again, no changes appeared over time nor any differences between the States. Even the addition of the second Control State does not alter the lack of any effect of AMA training in E1 and E2 between the Fall of 1971 and the following Spring.

Item #7: Fall 1970 to Spring 1972

We now compare whether the Experimental States were able to resolve group disagreement better before AMA training or over a year after training. As is the case in many programs of this type, the positive effects observed in E1 immediately after training had dissipated completely by Spring 1972. But E2 seemed to be helped by the program, since the Control State's skill in dealing with conflict decreased faster than did E2's.

DATA SUMMARY

Management Team Relations

Fall, 1970 - Spring, 1972

		IMPACT OF TRAINING		
Item	Type of Data CONTENT	Positive Effect	No Effect	Negative Effect
1	Promote cooperative teamwork		E1	E2
2	Amount of cooperative teamwork	E1	E2	
	QUESTIONNAIRE			
3	My group works hard to achieve its goals.	E1,E2		
4	My work group understands what we are trying to achieve.		E1	E2
5	I feel my group works well together.	E2	E1	
6	I really feel my immediate work group is getting things done.	E1		E2
7	When differences arise in my work group, we have good ways for settling them ourselves.	E2	E1	

Cooperative teamwork as essential to the team planning process was treated in two ways by the content analysis. It was considered as a possible benefit of AMA training, and as a potential obstacle to organizational change. E1 received nearly what it expected before training by way of benefit, while E2 benefited much less than anticipated. As a roadblock, cooperative teamwork remained at similar pre- and post-training levels in E2, and diminished in E1.

The questionnaire items associated with group effectiveness recorded across-the-board reductions between Fall 1970 and Spring 1972. Nevertheless, because of the need to compare these Experimental State changes with developments in the Control States during the same period, negative effects were assigned on only two items.

Mixed training effects were associated with the smooth functioning of work groups in both States. Groups understood less about expected results in E2; they improved techniques for settling conflict in E2; they accomplished more in E1 and less in E2, and worked together better in E2. The analysis showed no other effects.

E2's reaction to AMA training appears rather unstable, as evinced by the numerous positive and negative effects attributed to training, as well as by the scarcity of E2 items on which training had no effect. Training effects were minimal in E2; their management team relations were largely untouched by the training process. The AMA team planning process did not create a team in E1; it merely worked with one that already existed.

Section 3: LEA Attitudinal Data

The intervening variables of the local education agencies reflect their internal health. These variables help determine if the procedures and principles of the AMA team planning process will be translated into meaningful changes and improved educational products.

The approach taken in this section resembles the one we used in the SED's, where data was organized into comparable categories:

A. Leadership Climate

B. Decisionmaking

C. Management Team Relations

Data was gathered from participating LEA's through the use of questionnaires only. In displaying questionnaire data within each category, two comments will be provided:

1. Questionnaire Item: The statement in the questionnaire to which a response was given on a scale of (1) not at all to (7) very often.

2. Points of Time: For each item, the time at which it was administered will be indicated (T1 = Fall 1970; T2 = Spring 1971; T3 = Fall 1971; T4 = Spring 1972).

The questionnaire items were administered in the four Experimental groups during all time periods. In addition, two Control groups were added for the T3 and T4 comparisons. Since every questionnaire item was asked, at varying times, to the four Experimental groups and two Control groups, it will not be necessary to specify the LEA's on each item.

Results of training were usually determined on the basis of a T1-T4 comparison. In some instances, however, it was considered appropriate to attribute effects after T3-T4 comparisons. While offering a shorter time span, these Fall 1971 to Spring 1972 comparisons were done with Control groups present. The T1-T4 comparisons lack Control groups. The only exception to this general rule involves those items that were designed to measure attitudes toward AMA's role in the training. Since questions about the AMA had limited relevance to those organizations which did not participate in the program, the Control LEA's were not asked to answer such questions.

Because of the procedural and methodological safeguards built into this research design, we have almost equal confidence in the conclusions drawn from both sets of evidence: T1-T4 and T3-T4.

A. Leadership Climate

Six (6) questionnaire items were selected to assess the leadership climate within the LEA's:

1. Based on information I have received from my boss, I know if I am measuring up in my job.

   Points of Time: T1, T2, T3, T4 (The other items in this category were sampled at the same points in time.)

2. My manager encourages and supports innovation.

3. Higher management's reactions to the problems which reach them are fair.

4. My manager knows and understands the problems I face.

5. My manager recognizes when a problem is developing and does something constructive about it.

6. My manager shows confidence and trust in me.

Item 1 : Based on information I have received from my boss, I know if I am measuring up in my job.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.285	1.242	25	4.760	1.562	32	5.562	1.014	31	5.612	1.022
Experimental LEA #2	39	5.051	1.503	26	4.807	1.233	31	5.032	1.224	31	5.225	1.203
Experimental LEA #3	33	5.121	1.023	17	4.352	1.320	24	5.208	1.020	23	4.695	1.258
Experimental LEA #4	27	5.222	1.395	23	4.782	1.953	29	5.103	1.611	27	4.703	1.727
Control LEA #1							30	5.000	1.286	20	5.100	1.020
Control LEA #2							36	5.333	1.330	33	5.242	1.299
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	2.152	NS	4.712	.05	0.370	NS	1.235	NS
Experimental LEA #2	Row	0.126	NS	1.040	NS	5.245	.05	1.895	NS
Experimental LEA #3 W/	Col.	4.212	.05	3.310	NS	2.515	NS	3.248	NS
Experimental LEA #4	Row	0.813	NS	0.252	NS	0.028	NS	0.043	NS
Experimental LEA #1 W/	Col.					0.128	NS		
Control LEA #1	Row					6.551	.05		
Experimental LEA #2 W/	Col.					0.403	NS		
Control LEA #1	Row					0.116	NS		
Experimental LEA #3 W/	Col.					1.628	NS		
Control LEA #2	Row					2.017	NS		
Experimental LEA #4 W/	Col.					0.843	NS		
Control LEA #2	Row					2.070	NS		

Item 2 : My manager encourages and supports innovation.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	6.250	0.751	25	5.240	1.690	32	6.406	0.614	31	6.129	0.805
Experimental LEA #2	39	5.923	1.285	26	5.953	1.137	31	6.096	0.907	32	6.062	1.014
Experimental LEA #3	33	5.969	0.983	17	5.[illegible]47	1.169	24	5.958	0.907	23	5.739	1.355
Experimental LEA #4	27	6.074	1.206	23	5.521	1.780	29	6.068	1.131	27	5.481	1.553
Control LEA #1							30	5.823	1.366	20	5.950	1.050
Control LEA #2							36	6.333	1.146	33	6.151	0.795
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3			T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.		F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	4.261	.05	9.888	.01		1.061	NS	0.002	NS
Experimental LEA #2	Row	0.918	NS	1.258	NS		1.546	NS	1.207	NS
Experimental LEA #3 W/	Col.	2.700	NS	2.510	NS		2.602	NS	2.824	NS
Experimental LEA #4	Row	0.001	NS	0.000	NS		0.086	NS	0.097	NS
Experimental LEA #1 W/						Col.	0.179	NS		
Control LEA #1						Row	3.947	.05		
Experimental LEA #2 W/						Col.	0.038	NS		
Control LEA #1						Row	0.796	NS		
Experimental LEA #3 W/						Col.	1.000	NS		
Control LEA #2						Row	3.858	.05		
Experimental LEA #4 W/						Col.	3.351	NS		
Control LEA #2						Row	4.945	.05		

Item 3 : Higher management's reactions to the problems which reach them are fair.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.785	0.875	25	5.400	1.658	32	6.004	0.842	31	5.806	1.013
Experimental LEA #2	39	5.205	1.217	26	4.615	1.098	31	5.451	1.286	31	5.419	1.088
Experimental LEA #3	33	5.454	1.120	17	5.470	1.462	24	5.875	0.899	23	5.521	0.994
Experimental LEA #4	26	5.076	1.741	23	5.030	1.678	29	5.517	1.378	27	5.148	1.536
Control LEA #1							30	5.866	1.195	20	6.000	0.858
Control LEA #2							36	5.694	1.260	33	5.636	1.112
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/ Experimental LEA #2	Col.	4.478	.05	9.522	.01	0.349	NS	0.382	NS
	Row	8.772	.01	8.203	.01	5.990	.05	6.482	.05
Experimental LEA #3 W/ Experimental LEA #4	Col.	0.009	NS	2.520	NS	2.127	NS	0.067	NS
	Row	1.882	NS	2.035	NS	2.180	NS	1.992	NS
Experimental LEA #1 W/ Control LEA #1	Col.					0.024	NS		
	Row					0.024	NS		
Experimental LEA #2 W/ Control LEA #1	Col.					0.053	NS		
	Row					5.147	.05		
Experimental LEA #3 W/ Control LEA #2	Col.					0.974	NS		
	Row					0.025	NS		
Experimental LEA #4 W/ Control LEA #2	Col.					0.811	NS		
	Row					1.969	NS		

Item 4 : My manager knows and understands the problems I face.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	6.035	0.999	25	4.640	1.845	32	5.000	0.983	32	5.656	0.970
Experimental LEA #2	39	5.512	1.315	26	5.192	1.265	31	5.967	0.795	32	5.750	0.879
Experimental LEA #3	33	5.575	1.275	17	5.176	1.286	24	5.583	1.017	23	5.217	1.166
Experimental LEA #4	27	5.407	1.308	23	5.304	1.987	29	5.684	1.256	27	5.111	1.601
Control LEA #1							30	5.766	1.104	20	5.300	1.341
Control LEA #2							36	5.555	1.382	33	5.121	1.430
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	11.195	.001	20.690	.001	3.011	NS	0.142	NS
Experimental LEA #2	Row	0.000	NS	1.227	NS	0.036	NS	1.294	NS
Experimental LEA #3 W/	Col.	0.680	NS	1.175	NS	3.424	NS	1.590	NS
Experimental LEA #4	Row	0.004	NS	0.150	NS	0.000	NS	0.279	NS
Experimental LEA #1 W/	Col.					3.846	.05		
Control LEA #1	Row					2.035	NS		
Experimental LEA #2 W/	Col.					1.567	NS		
Control LEA #1	Row					3.089	NS		
Experimental LEA #3 W/	Col.					2.796	NS		
Control LEA #2	Row					0.064	NS		
Experimental LEA #4 W/	Col.					3.937	.05		
Control LEA #2	Row					0.059	NS		

Item 5 : My manager recognizes when a problem is developing and does something constructive about it.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.964	0.744	25	4.760	1.640	32	5.937	0.877	31	5.516	1.121
Experimental LEA #2	39	5.461	1.210	26	5.115	1.117	31	5.580	1.118	32	5.562	1.014
Experimental LEA #3	33	5.696	1.103	17	5.560	1.215	24	5.541	1.062	23	4.826	1.497
Experimental LEA #4	27	5.407	1.474	23	4.956	1.637	29	5.482	1.352	27	4.777	1.601
Control LEA #1							30	5.566	1.278	20	5.350	1.348
Control LEA #2							36	5.388	1.439	33	5.151	1.325
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/ Experimental LEA #2	Col.	11.538	.001	13.016	.001	1.415	NS	0.867	NS
	Row	0.104	NS	0.000	NS	0.706	NS	1.498	NS
Experimental LEA #3 W/ Experimental LEA #4	Col.	4.086	.05	3.464	NS	6.601	.05	7.633	.01
	Row	0.344	NS	0.031	NS	0.037	NS	0.	NS
Experimental LEA #1 W/ Control LEA #1	Col.					2.105	NS		
	Row					1.491	NS		
Experimental LEA #2 W/ Control LEA #1	Col.					0.270	NS		
	Row					0.251	NS		
Experimental LEA #3 W/ Control LEA #2	Col.					3.480	NS		
	Row					0.114	NS		
Experimental LEA #4 W/ Control LEA #2	Col.					3.360	NS		
	Row					0.296	NS		

Item 6 : My manager shows confidence and trust in me.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	6.428	0.690	25	5.520	1.661	32	6.343	0.787	31	6.258	0.929
Experimental LEA #2	39	5.974	0.873	26	5.269	1.250	31	6.225	0.716	32	5.750	1.047
Experimental LEA #3	33	6.090	1.071	17	5.823	1.467	24	6.166	0.816	23	5.826	0.984
Experimental LEA #4	27	6.222	1.120	23	5.956	1.691	29	6.137	0.990	27	5.666	1.467
Control LEA #1							30	6.133	0.973	20	6.150	0.988
Control LEA #2							36	5.972	1.206	33	5.818	1.044
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3			T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.		F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	14.425	.001	17.542	.001		3.201	NS	1.546	NS
Experimental LEA #2	Row	2.753	NS	0.752	.001		3.980	.05	9.181	.01
Experimental LEA #3 W/	Col.	0.963	NS	0.978	NS		3.468	NS	3.289	NS
Experimental LEA #4	Row	0.236	NS	0.038	NS		0.186	NS	0.003	NS
Experimental LEA #1 W/						Col.	0.038	NS		
Control LEA #1						Row	0.825	NS		
Experimental LEA #2 W/						Col.	1.639	NS		
Control LEA #1						Row	0.735	NS		
Experimental LEA #3 W/						Col.	1.561	NS		
Control LEA #2						Row	0.261	NS		
Experimental LEA #4 W/						Col.	2.155	NS		
Control LEA #2						Row	0.001	NS		

Item #1: Fall 1970 to Spring 1971

Item #1 is Based on information I have received from my boss, I know if I am measuring up in my job. No significant differences existed between EL1/EL2 or EL3/EL4 although all four demonstrated less feedback on job performance between Fall 1971 and Spring 1971. Introduction of the AMA change strategies to EL1 or EL2 cannot be held to have affected either organization, given their slight shifts over time. However, recalling the deleterious effect that lack of a control group exerts on our findings, we still sense a negative training effect in other Experimental LEA's. Decreased information flow was sufficient to warrant such a conclusion in EL3 and EL4.

Item #1: Spring 1971 to Fall 1971

EL3 and EL4 reversed their downward trend during this post-training period; information on how well members were performing flowed better in the Fall of 1971 than in the Spring. Since these more recent increases were not very large, however, it is impossible to give AMA great credit for them. The AMA exerted another positive impact on EL1 and EL2, since both groups reported significant increases with no measurable disparity between them. We can ascribe positive training effects to both organizations during this period.

Item #1: Fall 1971 to Spring 1972

Again, we can have more confidence about our analysis here due to the addition of Control LEA's against which to compare Experimental LEA progress. EL1 offers considerably more data on job performance than EL2 or CL1. But comparing the Experimental groups against each other and against their respective controls, no definite effects of the AMA experience appear between Fall 1971 and Spring 1972.

Item #1: Fall 1970 to Spring 1972

A review of possible changes over this 18-month period reveals that bosses relayed slightly more information after training in EL1 and EL2, but slightly less in EL3 and EL4. These small gains and losses were in all cases insignificant. Due to this statistical stability, no training effects were measurable.

Item #2: Fall 1970 to Spring 1971

Item #2 is My manager encourages and supports innovation. During the Fall 1970 to Spring 1971 period, three

Experimental LEA's (EL1, EL3 and EL4) showed declining support for new ideas and change, while the fourth (EL2) increased slightly. Only in the case of EL1 was the downward shift significant; it reflected a negative effect of training. No other LEA reported a loss of such magnitude.

Item #2: Spring 1971 to Fall 1971

The negative training effects observed in EL1 were temporary; this Experimental LEA showed a much more favorable impact of training T2-T3. The degree to which their managers encouraged innovation rose considerably and this was interpreted as a positive training effect. EL2 also enhanced their supportive behavior but not enough to be significant nor to open any gap with EL1. Similar increases turned up in EL3 and EL4, but these were inconsequential; neither Experimental LEA differed from the other in a major way. Overall, therefore, the period Spring to Fall 1971 brought positive effects to EL1 and no effects to EL2, EL3, or EL4.

Item #2: Fall 1971 to Spring 1972

Encouragement and support for innovation fell in all Experimental groups over time, but none declined enough to label this fall significant. A further comparison with the Control LEA's reinforces this conclusion. While EL1 showed substantially more innovative activity than CL1, and CL2's managers favored change more than either EL3 or EL4 managers, these variations were stable over time--all Experimental LEA's felt nearly the same in both periods. Without any sizable modifications, it was not possible to attribute any training effects to AMA in T3-T4.

Item #2: Fall 1970 to Spring 1972

Taking a longitudinal view, we found that all managers acted similarly toward innovation before and after training. Any visible variations up or down or between groups proved to be inconsequential. We thus concluded that the AMA pilot program had no effect on the degree to which managers in the LEA's supported innovative activities.

Item #3: Fall 1970 to Spring 1971

Item #3 concerns how superiors respond to problems brought to their attention: Higher management's reactions to the problems which reach them are fair. Negative training effects occurred in EL2, who felt that reactions of their superiors were more unfair after training than before. In this they were substantially below the other Experimental LEA in that State, EL1. No effects were determined in EL3 or EL4. All LEA's, except EL3, met with less favorable management responses between Fall 1970 and Spring 1971.

Item #3: Spring 1971 to Fall 1971

There were no impressive changes on this organizational variable in EL3 or EL4 in 1971, although both improved moderately. The real changes occurred in EL2; higher management's reactions were much fairer in the Fall than they had been in the Spring. This transformation was definitely a result of AMA training. E1 also enhanced their communication system but not enough to attribute the improvement to the team planning process learned at Hamilton.

Item #3: Fall 1971 to Spring 1972

All Experimental LEA's declined during this period although in no instance were reductions significant. Differences were created by the varied rates of decline, however. EL2 thought their managers responded to them more unfairly than did EL1, and this difference was considerable. When compared to the Control LEA added to strengthen the Y2 research design, EL2 also showed at a distinct disadvantage. No other difference was observed between any Experimental LEA or between any Experimental and Control LEA's.

Item #3: Fall 1970 to Spring 1972

The crucial T1-T4 comparison revealed no training effects. While EL1 continued to feel better about their managerial relations than EL2, no changes over time were involved in this difference. Nothing distinguished EL3 from EL4 although EL3 increased slightly while EL4 showed a modest decline. Overall, therefore, in all LEAs the AMA program did not influence higher management's reactions to problems that reached them.

Item #4: Fall 1970 to Spring 1971

Item #4, My manager knows and understands the problems I face, is another factor forming a suitable leadership climate. Between Fall 1970 and Spring 1971, management understanding in the LEA's declined; most of all in EL1. In fact the decreases in that organization were so pronounced when compared to EL2 that the AMA was held accountable for negative training effects in EL1. There existed no further change over time in any LEA, or substantial differences between them. Interpretation of this data depended upon the four Experimental LEA's alone, without benefit of a Control LEA; so we were especially careful of our attributions.

Item #4: Spring 1971 to Fall 1971

No significant differences between the Experimental LEA's were reported during 1971. With two exceptions, no shifts appeared in these agencies in how managers viewed problems. The exceptions were EL1 and EL2. While the managerial empathy aspect of their leadership climate had declined T1-T2, it rose appreciably T2-T3. EL1 was able to credit training with positive effects; positive effects followed in EL2. Both groups also exhibited a growing consensus favoring this climatic improvement.

Item #4: Fall 1971 to Spring 1972

The addition of the Control LEA's strengthen our findings here. Two of these Control group comparisons provided data on training effects. In one case (EL1/CL1) these effects were positive, since the Experimental LEA's managerial knowledge of subordinate difficulties increased again, while the same factor declined in the Control LEA's. The other instance showed EL4 and CL2 decline; but since the LEA which had been trained fell more severely than the LEA which had not, negative effects were determined in EL4.

Item #4: Fall 1970 to Spring 1972

The Experimental LEAs' feelings on this item before training (Fall 1970) compared with how they felt after training (Spring 1972) evinced the durability of training effects. It appears in this case that these effects lacked durability. For whatever the effects had been earlier, in this most important comparison they had vanished. We found no measurable changes or differences, and thus no training effects were assigned.

Item #5: Fall 1970 to Spring 1971

What top administrators do about problems developing in their organizations is the subject of Item #5, *My manager recognizes when a problem is developing and does something constructive about it*. From the pre- to immediate post-training periods, all LEA's experienced negative training effects. Recognition of emerging issues fell substantially as a result of the AMA program. There were no major differences between EL1/EL2 or EL3/EL4 at this time.

Item #5: Spring 1971 to Fall 1971

EL3 and EL4 met with no improvements in the 1971 post-training periods. Their managements' responses to problems stabilized at about the same level as before. However, positive training effects occurred in EL1. Both EL1 and EL2 gained considerably on these items between Spring and Fall, but only EL1 was assigned positive effects because of its steeper rise and because persons in EL1 showed tremendously increased consensus reflecting the higher opinion of their leadership.

Item #5: Fall 1971 to Spring 1972

No difference showed in any Experimental LEA or between the Experimental LEA's and the Control LEA's. Furthermore, most of the management teams that were trained were not viewed any differently in the Spring of 1972 than they had been in the Fall of 1971. Nevertheless, a minority report cropped up here; EL3 and EL4 did change. They reduced their constructive approach to problems, in declines significant enough to have occurred as a result of AMA training.

Item #5: Fall 1970 to Spring 1972

The negative change in EL3 and EL4 carried over into the T1-T4 comparison.. An overall assessment of the impact of the team planning process revealed that it adversely affected the leadership climate in both organizations. EL2 had slightly greater success on this item while EL1 had a small decline, but neither group's change was significant. Thus no training effects were attributed to the AMA in EL1 or EL2.

Item #6: Fall 1970 to Spring 1971

My manager shows confidence and trust in me is Item #6 of this analysis, which shows LEA declines in this area between Fall 1970 and Spring 1971. As far as EL3 and EL4 were concerned, the loss of confidence was not sizable enough to be attributed to the AMA. However, EL1 and EL2's drop was sufficient for the program to be held responsible. In addition, agreement among persons in these organizations was fragmented during this time, as indicated by the increased standard deviation.

Item #6: Spring 1971 to Fall 1971

This decline was reversed in 1971. Both EL1 and EL2 showed favorable upward modification on this variable. Confidence and trust were considerably improved as was organizational consensus about these favorable elements of leadership climate. Although small positive shifts appeared in EL3 and EL4, these were minimal and reflected a stabilization of earlier beliefs.

Item #6: Fall 1971 to Spring 1972

EL1 became different from EL2 in T3-T4. Both Experimental LEAs' management relations grew more strained; however, E2 developed a significantly more hostile climate. There were no training effects since neither group had changed much over time. A comparison of EL3 with EL4 also indicated that the team planning process had not affected these organizations. Neither underwent major changes or developed significant differences from the other. Consideration of the Control LEA's reinforces this "no effects" judgment.

Item #6: Fall 1970 to Spring 1972

If we take the longest possible view of training effects (between Fall 1970 and Spring 1972) none occurred in the LEA's that participated in the AMA program. EL2 showed slightly less confidence and trust than EL1 before training, and substantially less a year after training. Nonetheless they did not demonstrate major changes over time. EL3 and EL4 had no differences between them nor had they much shifted these opinions between T1 and T4.

DATA SUMMARY
Leadership Climate
Fall, 1970 - Spring, 1972

Item	Type of Data QUESTIONNAIRE	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
1	Based on information I have received from my boss, I know if I am measuring up in my job.		EL1, EL2, EL3, EL4	
2	My manager encourages and supports innovation.		EL1, EL2, EL3, EL4	
3	Higher management's reactions to the problems which reach them are fair.		EL1, EL2, EL3, EL4	
4	My manager knows and understands the problems I face.		EL1, EL2, EL3, EL4	
5	My manager recognizes when a problem is developing and does something constructive about it.		EL1, EL2,	EL3, EL4
6	My manager shows confidence and trust in me.		EL1, EL2, EL3, EL4	

Six items were designed to measure the impact of AMA training on the leadership slimate in the LEA's. Taking the longest possible view (pre-training, Fall 1970, to Spring 1972), we find that with two exceptions no significant effects on the relations between managers and their subordinates were shown.

Two exceptions to this general pattern appear on Item #5, on which EL3 and EL4 experienced negative effects of training concerning the extent to which managers seemed able to recognize and resolve problems.

Looking at the individual LEA's, we see a common pattern in which EL1 generally believed it had a more positive leadership climate than any of the other LEA's, although this feeling was not statistically significant. Over time, all the school districts experienced a stabilization effect and showed approximately the same attitudes toward their leadership after training, as they had held before it. The training program with the AMA did not affect attitudes concerning this category of variables, with the two exceptions noted.

This analysis clearly indicates that AMA training does not influence subordinates' attitudes toward managers. This may be the direct result of the fact that the managers do not act differently before and after AMA training.

B. Decisionmaking

The analysis of decisionmaking will be based on three questionnaire items:

1. The people I work with participate appropriately in setting the goals of our work.

   Points of Time: T1, T2, T3, T4

2. I am appropriately involved in decisions affecting my work.

   Points of Time: T1, T2, T3, T4

3. I can influence the goals, methods, and activities of my organization.

   Points of Time: T3, T4

Item 1 : The people I work with participate appropriately in setting the goals of our work.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.500	0.962	25	5.040	1.567	32	5.875	0.975	31	5.677	0.652
Experimental LEA #2	39	5.076	1.222	26	4.423	1.474	31	5.483	1.387	32	5.187	1.255
Experimental LEA #3	33	5.090	1.283	17	5.176	0.882	24	5.750	0.737	23	5.130	1.423
Experimental LEA #4	27	5.148	1.511	23	4.695	1.917	29	5.310	1.137	26	4.769	1.680
Control LEA #1							30	5.533	1.195	20	5.650	1.089
Control LEA #2							36	5.083	1.338	33	4.969	1.185
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/ Experimental LEA #2	Col.	5.185	.05	13.885	.001	1.573	NS	0.583	NS
	Row	4.520	.05	3.925	.05	5.007	.05	5.865	NS
Experimental LEA #3 W/ Experimental LEA #4	Col.	0.370	NS	4.957	.05	5.094	.05	0.356	NS
	Row	0.494	NS	2.297	NS	2.425	NS	0.285	NS
Experimental LEA #1 W/ Control LEA #1	Col.					0.045	NS		
	Row					0.951	NS		
Experimental LEA #2 W/ Control LEA #1	Col.					0.140	NS		
	Row					1.140	NS		
Experimental LEA #3 W/ Control LEA #2	Col.					2.550	NS		
	Row					3.247	NS		
Experimental LEA #4 W/ Control LEA #2	Col.					1.830	NS		
	Row					0.003	NS		

Item 2 : I am appropriately involved in decisions affecting my work.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.964	1.035	25	5.200	1.707	32	6.125	0.870	31	5.903	0.943
Experimental LEA #2	39	5.769	1.157	26	4.653	1.440	31	5.645	1.443	32	5.562	1.134
Experimental LEA #3	33	5.303	1.530	17	5.294	1.358	24	5.833	0.916	23	5.391	1.117
Experimental LEA #4	27	5.666	1.300	23	5.086	1.998	29	5.827	1.283	27	5.296	1.353
Control LEA #1							30	5.533	1.166	20	5.600	1.142
Control LEA #2							36	5.694	1.090	33	5.636	1.084
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	14.277	.001	13.390	.001	0.566	NS	1.977	NS
Experimental LEA #2	Row	2.200	NS	3.838	NS	4.114	.05	0.494	NS
Experimental LEA #3 W/	Col.	0.829	NS	4.468	.05	4.258	.05	0.293	NS
Experimental LEA #4	Row	0.058	NS	0.123	NS	0.045	NS	0.266	NS
Experimental LEA #1 W/ Control LEA #1	Col.					0.156	NS		
	Row					5.192	.05		
Experimental LEA #2 W/ Control LEA #1	Col.					0.001	NS		
	Row					0.023	NS		
Experimental LEA #3 W/ Control LEA #2	Col.					1.551	NS		
	Row					0.069	NS		
Experimental LEA #4 W/ Control LEA #2	Col.					1.874	NS		
	Row					0.231	NS		

Item 3 I can influence the goals, methods, and activities of my organization.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	5.750	0.879	31	5.774	0.804
Experimental LEA #2	31	5.322	1.221	32	5.375	1.263
Experimental LEA #3	24	5.125	1.483	23	5.000	1.087
Experimental LEA #4	29	5.517	1.121	27	5.000	1.664
Control LEA #1	30	5.566	0.987	20	5.450	1.234
Control LEA #2	36	5.138	1.312	33	5.363	1.167
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	0.040	NS
Experimental LEA#2	Row	4.766	.05
Experimental LEA#3W/	Col.	1.417	NS
Experimental LEA#4	Row	0.528	NS
Experimental LEA#1W/	Col.	0.066	NS
Control LEA #1	Row	1.997	NS
Experimental LEA#2W/	Col.	0.020	NS
Control LEA #1	Row	0.515	NS
Experimental LEA#3W/	Col.	0.043	NS
Control LEA #2	Row	0.617	NS
Experimental LEA#4W/	Col.	0.378	NS
Control LEA #2	Row	0.000	NS

Item #1: Fall 1970 to Spring 1971

Item #1, The people I work with participate appropriately in setting the goals of our work, indicates felt involvement in organizational decisionmaking. Measurement in Fall 1970 (before training) and again in Spring 1971 (immediately after training) indicates EL1, EL2, and EL4 considered that their role in setting goals diminished after training. On the other hand, EL3 sensed a minor enlargement of their involvement, but not a significant one. Neither was the decline endured by EL3 significant. However, the reductions which transpired in EL1 and EL2 were substantial and comparable in each organization. Although the lack of a control group must be considered in appraising training effects, it is still clear that decreased levels of participation in EL1 and EL2 were negative impacts of the AMA program.

Item #1: Spring 1971 to Fall 1971

Comparing T2-T3 responses to this item reveals across-the-board positive effects of training. Every Experimental LEA increased their involvement in establishing work goals, and in every case the increase was major. EL1 showed much greater participation than EL2; while EL3 and EL4 were about the same.

Item #1: Fall 1971 to Spring 1972

What occurred in T1-T2 reoccurred in T3-T4 on a larger scale. Not only did EL1/EL2 reduce participation in decisions on goals, but this downward movement took place in EL3/EL4. Losses in the former were minimal while those in the latter were sizable. However, comparing both sets of LEA's to their respective Controls indicates no effects of training. No significant changes over time nor any significant differences between the Experimental and Control LEA's were found.

Item #1: Fall 1970 to Spring 1972

Small increases in appropriate participation in goal setting were experienced in EL1. Comparable increases appeared in EL2 and EL3. EL4's involvement weakened slightly. None of these changes was significant from Fall 1970 to Spring 1972. And since this long view is the most crucial comparison, we cannot hold training accountable for any effects in any Experimental LEA's.

Item #2: Fall 1970 to Spring 1971

Item #2, I am appropriately involved in decisions affecting my work, is an audit of the Experimental LEA's (4) over two points of time: pre- and immediately post-training. In EL3 and EL4, AMA cannot be held responsible for their losses in involvement since these changes were not at significant levels; these organizations also showed comparable levels of participation. Yet EL1 and EL2 were significantly less participative after training than they had been before. Due to these considerable reductions (with no measurable variation between EL1 and EL2), the AMA must be assigned negative training effects.

Item #2: Spring 1971 to Fall 1971

Involvement in the LEA's was enhanced by their introduction to the team planning process during this period. Considerable increases were reported by them. EL1 not only felt the greatest influence over their decisionmaking process but also reached closer consensus on this point (as shown by a drop in the SD column--standard deviation).

Item #2: Fall 1971 to Spring 1972

EL3 and EL4 sensed more participation in the Fall of 1971 than they did in the following Spring. While this decrease was significant when each was compared to the other, it was insignificant when Control LEA (EL1) entered the analysis. Consequently, the fact that T3-T4 showed diminishing involvement in work-related decisions in these LEA's is not the result of the AMA program. During this period, EL1 and EL2, while consistent in their different levels of involvement, were also stable over time; no training effects appeared in them, either.

Item #2: Fall 1970 to Spring 1972

The most valuable perspective is longitudinal. We examine felt participation before and after training to assess what effect, if any, AMA exerted on the decisionmaking processes a full year after training. There does not appear to be much difference in any group's involvement between Fall 1970 and Spring 1972. Any superficial differences proved statistically insignificant. What the LEA's did at Hamilton seemed to have no effect on this aspect of their decisionmaking processes.

Item #3: Fall 1971 to Spring 1972

Item #3, I can influence the goals, methods, and activities of my organization, was asked only in Y2. Any conclusions drawn from this item must be handled with caution. An analysis of the data indicates no significant differences over time between the LEA's and the Control groups. Only one significant difference appears in a comparison of two LEA's: EL1 and EL2 differed significantly; personnel in EL1 saw themselves as more influential on the goals of the organization than personnel in EL2. However, because no significant change occurred over time in either LEA, no training effects can be ascribed.

DATA SUMMARY

Decisionmaking

Fall, 1970 - Spring, 1972

Item	Type of Data QUESTIONNAIRE	IMPACT OF TRAINING Positive Effect	No Effect	Negative Effect
1	The people I work with participate appropriately in setting the goals of our work.		EL1, EL2, EL3, EL4	
2	I am appropriately involved in decisions affecting my work.		EL1, EL2, EL3, EL4	
3	I can influence the goals, methods, and activities of my organization.		EL1, EL2, EL3, EL4	

An analysis of these three items about the decisionmaking climate in the LEA's clearly indicates no effects that can be attributed to their training with the American Management Association.

From the specific LEA's a persistent pattern emerges once again. Personnel in EL1 express a higher level of participation in the decisionmaking process within the district than is expressed in the other LEA's. This difference is not significant, however. From a longitudinal perspective, every LEA in this study showed no significant change in their decisionmaking pattern. If the pattern was relatively open before training, it remained so. If personnel felt that they were not appropriately drawn into the affairs of the school district, their attitudes remained so.

As we have indicated, these findings should be interpreted with every caution appropriate to a research design that lacks a pre-test with a Control group.

C. Management Team Relations

These five questionnaire items have been selected to evaluate management team relations:

1. My group works hard to achieve its goals.

   Points of Time: T1, T2, T3, T4 (The other items in this category have the same four points of time.)

2. My work group understands what we are trying to achieve.
3. I feel my group works well together.
4. I really feel my immediate work group is getting things done.
5. When differences arise in my work group, we have good ways for settling them ourselves.

Item 1 : My group works hard to achieve its goals.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.750	1.004	25	5.320	1.519	32	6.062	0.840	31	6.043	1.032
Experimental LEA #2	39	5.538	1.120	26	4.961	1.148	31	5.806	1.301	31	5.548	1.260
Experimental LEA #3	33	6.212	0.427	17	6.235	0.752	24	6.208	0.721	23	6.000	1.000
Experimental LEA #4	27	6.185	0.681	23	5.913	1.703	29	5.896	0.476	26	5.884	1.366
Control LEA #1							30	5.900	0.758	20	5.550	0.825
Control LEA #2							36	5.805	1.450	33	5.878	0.927
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/ Experimental LEA #2	Col.	5.060	.05	12.118	.001	0.637	NS	0.433	NS
	Row	1.621	NS	1.816	NS	3.105	NS	2.824	NS
Experimental LEA #3 W/ Experimental LEA #4	Col.	0.311	NS	0.008	NS	0.280	NS	1.708	NS
	Row	0.613	NS	1.797	NS	1.054	NS	0.131	NS
Experimental LEA #1 W/ Control LEA #1	Col.					1.512	NS		
	Row					3.334	.05		
Experimental LEA #2 W/ Control LEA #1	Col.					2.107	NS		
	Row					0.516	NS		
Experimental LEA #3 W/ Control LEA #2	Col.					0.105	NS		
	Row					1.589	NS		
Experimental LEA #4 W/ Control LEA #2	Col.					0.019	NS		
	Row					0.049	NS		

Item 2 : My work group understands what we are trying to achieve.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.642	0.869	25	4.760	1.507	32	5.968	0.897	31	5.903	0.830
Experimental LEA #2	39	5.435	1.231	26	4.653	1.412	31	5.322	1.491	32	5.437	1.318
Experimental LEA #3	33	5.303	0.983	17	5.823	0.951	24	5.750	0.793	23	5.652	0.934
Experimental LEA #4	27	5.444	1.012	23	5.260	1.789	29	5.724	1.098	26	5.500	1.029
Control LEA #1							30	6.033	0.718	20	5.550	0.887
Control LEA #2							36	5.472	1.383	33	5.666	1.080
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3			T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.		F	Signif.	F	Signif.
Experimental LEA #1 W/ Experimental LEA #2	Col.	12.386	.001	13.921	.001		0.014	NS	0.453	NS
	Row	0.438	NS	2.235	NS		7.139	.01	2.992	NS
Experimental LEA #3 W/ Experimental LEA #4	Col.	0.450	NS	0.568	NS		0.683	NS	1.114	NS
	Row	0.704	NS	1.296	NS		0.209	NS	0.000	NS
Experimental LEA #1 W/ Control LEA #1						Col.	2.958	NS		
						Row	0.818	NS		
Experimental LEA #2 W/ Control LEA #1						Col.	0.669	NS		
						Row	3.341	NS		
Experimental LEA #3 W/ Control LEA #2						Col.	0.052	NS		
						Row	0.392	NS		
Experimental LEA #4 W/ Control LEA #2						Col.	0.004	NS		
						Row	0.040	NS		

Item 3 : I feel my group works well together.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.642	0.869	25	5.439	1.581	32	6.000	1.047	31	5.741	1.315
Experimental LEA #2	39	5.205	1.004	26	4.730	1.185	31	5.774	1.116	32	5.312	1.468
Experimental LEA #3	33	5.515	1.093	17	5.647	0.996	24	6.041	0.750	23	6.086	0.949
Experimental LEA #4	27	5.444	1.423	23	5.217	1.881	29	5.793	1.292	26	5.576	1.270
Control LEA #1							30	6.066	0.907	20	5.850	1.089
Control LEA #2							36	5.638	1.334	33	5.666	0.853
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	6.612	.05	19.427	.001	2.615	NS	0.242	NS
Experimental LEA #2	Row	2.647	NS	1.140	NS	2.167	NS	4.272	.05
Experimental LEA #3 W/	Col.	0.027	NS	3.058	NS	0.151	NS	2.309	NS
Experimental LEA #4	Row	0.767	NS	1.494	NS	2.975	NS	1.570	NS
Experimental LEA #1 W/	Col.					1.263	NS		
Control LEA #1	Row					0.171	NS		
Experimental LEA #2 W/	Col.					2.266	NS		
Control LEA #1	Row					3.392	NS		
Experimental LEA #3 W/	Col.					0.035	NS		
Control LEA #2	Row					4.473	.05		
Experimental LEA #4 W/	Col.					0.188	NS		
Control LEA #2	Row					0.022	NS		

Item 4 : I really feel my immediate work group is getting things done.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.785	0.917	25	4.880	1.641	32	5.968	0.897	31	5.806	0.872
Experimental LEA #2	39	5.384	1.183	26	4.846	1.286	31	5.709	0.901	32	5.531	1.135
Experimental LEA #3	33	5.818	0.808	17	5.705	0.919	24	5.791	0.431	23	5.782	1.042
Experimental LEA #4	27	5.444	1.527	23	5.434	1.804	29	5.793	0.977	26	5.692	0.884
Control LEA #1							30	5.400	0.803	20	5.400	1.046
Control LEA #2							36	5.750	1.204	33	5.727	1.179
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4			T_1 & T_4	
		F	Signif.	F	Signif.		F	Signif.	F	Signif.
Experimental LEA #1 W/ Experimental LEA #2	Col.	9.345	.01	19.005	.001		0.994	NS	0.203	NS
	Row	0.847	NS	0.427	NS		2.444	NS	3.326	NS
Experimental LEA #3 W/ Experimental LEA #4	Col.	0.050	NS	0.745	NS		0.082	NS	0.253	NS
	Row	1.411	NS	0.274	NS		0.054	NS	1.211	NS
Experimental LEA #1 W/ Control LEA #1						Col.	3.729	NS		
						Row	1.919	NS		
Experimental LEA #2 W/ Control LEA #1						Col.	3.289	NS		
						Row	0.024	NS		
Experimental LEA #3 W/ Control LEA #2						Col.	0.005	NS		
						Row	0.052	NS		
Experimental LEA #4 W/ Control LEA #2						Col.	0.098	NS		
						Row	0.000	NS		

Item 5 : When differences arise in my work group, we have good ways for settling them ourselves.

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.214	1.227	25	4.840	1.700	32	5.937	0.840	32	5.468	1.135
Experimental LEA #2	39	5.384	1.227	26	5.038	1.399	31	5.709	0.472	32	5.281	1.275
Experimental LEA #3	33	5.484	1.301	17	5.235	1.091	24	5.875	0.899	23	5.565	0.945
Experimental LEA #4	27	5.333	1.493	23	5.434	1.973	29	5.689	1.256	27	5.148	1.321
Control LEA #1							30	5.766	1.165	20	5.150	1.136
Control LEA #2							36	5.638	1.174	33	5.609	0.998
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	1.956	NS	14.377	.001	5.584	.05	0.124	NS
Experimental LEA #2	Row	0.512	NS	0.003	NS	1.196	NS	0.001	NS
Experimental LEA #3 W/	Col.	0.057	NS	2.382	NS	3.580	NS	0.044	NS
Experimental LEA #4	Row	0.006	NS	0.000	NS	1.793	NS	1.307	NS
Experimental LEA #1 W/	Col.					7.066	.01		
Control LEA #1	Row					1.437	NS		
Experimental LEA #2 W/	Col.					5.678	.01		
Control LEA #1	Row					0.028	NS		
Experimental LEA #3 W/	Col.					0.774	NS		
Control LEA #2	Row					0.251	NS		
Experimental LEA #4 W/	Col.					1.813	NS		
Control LEA #2	Row					0.411	NS		

Item #1: Fall 1970 to Spring 1971

Item #1 attempts to measure goal-directed activity by eliciting reactions to the statement *My work group works hard to achieve its goals*. Experimental LEA's #3 and #4 apparently worked harder than LEA's #1 and #2. Scores in the former were aggregately higher although no change occurred on a pre/post-training comparison. The AMA program had a negative impact on EL1 and EL2, however. Groups in those organizations put out significantly less effort after training.

Item #1: Spring 1971 to Fall 1971

Apparently the negative result of AMA training reported in T1-T2 in EL1 and EL2 had been reversed by the time of the T2-T3 assessment. Much more work was devoted to educational goals in Fall 1971 than in Spring 1971. In fact, the output reached at T3 was even greater than either Experimental LEA had achieved in T1. This constitutes a positive effect of learning the AMA planning process. There were mixed results in EL3 and EL4; one group went up and the other dropped. Neither change was attributable to training.

Item #1: Fall 1971 to Spring 1972

Our assessment at this time can be more definitive than during the preceding periods due to the addition of Control LEA's. As before, comparisons that use these controls engendered the same conclusions as comparisons without them. Contrasting EL1 with EL2, and EL3 with EL4, we found no significant differences between them nor did either experience any changes between Fall 1971 and Spring 1972. Based on this evidence, none of the groups was affected by AMA training. Adding the Control LEA's confirms this judgment: none of the Experimental LEA's changed in comparison to them. Two sets of data provide the same results: no effects could reasonably be called the responsibility of AMA.

Item #1: Fall 1970 to Spring 1972

No major difference existed between E1/E2 or E3/E4 in Fall 1970, before training began, and between these same organizations in Spring 1972, after it ended. EL1 labored hardest to achieve their goals, followed by EL3, EL4 and EL2, but none of them changed over time. This absence of any important movement one way or the other necessitates a finding of no training effects on this variable.

Item #2: Fall 1970 to Spring 1971

Organizational comprehension of expected results is assessed by Item #2, My work group understands what we are trying to achieve. Some improvements were made in EL3 after training, but these were so minimal as to be unattributable to the AMA program. Conversely, EL4's grasp of intended ends contracted, but it was still insufficient for assignment of any effects. Negative effects occurred in EL1 and EL2. Both Experimental LEA's declined significantly between Fall 1970 and the following Spring; they showed less understanding of expected results after training.

Item #2: Spring 1971 to Fall 1971

Little alteration was noted in EL3 or EL4 during the post-training period; whatever change took place was insignificant, and thus unattributable to the AMA. In T2-T3, EL3 displayed slightly less understanding, while EL4 showed somewhat more. However, the sizable gains registered by EL1 and EL2 in 1971 indicated a positive effect; both groups notably strengthened their grasp of the purpose of their work. Both Experimental LEA's showed commensurate gains.

Item #2: Fall 1971 to Spring 1972

EL1, EL2, EL3, and EL4 stabilized their levels of understanding between Fall 1971 and Spring 1972. Although a difference of some significance between EL1 and EL2 was revealed, it was inadequate justification for ascribing any effects to AMA training. EL3 and EL4 also did not recast their comprehension sufficiently that any change can be attributed to training. These opinions were strengthened by continued evaluation of Experimental and Control LEA differences. In comparison with the appropriate Control group, none of the Experimental LEA's significantly differed, nor did any shift over time. Therefore, the direct comparison of EL1/EL2 and EL3/EL4 as well as the comparisons with CL1 and CL2 offered the same conclusion: no effect of training.

Item #2: Fall 1970 to Spring 1972

A review of felt levels of understanding before training (Fall 1970) and of the same levels almost a year after training (Spring 1972) provides an overall assessment of the impact of AMA upon this variable. While the LEA's that entered the team planning process all showed limited growth in their understanding of expected results, these increases were inconsequential. For this reason, the AMA program is not responsible for any effects, positive or negative, in any group.

Item #3: Fall 1970 to Spring 1971

Looking at Item #3, I feel my group works well together, during the immediate pre- and post-training periods reveals that, with one exception, all LEA's had less satisfactory team relations after training. EL3 slightly improved its work group relations. However, only one such change was significant enough to attribute to AMA training. EL1 and EL2 showed a negative training effect, for in both states work relations deteriorated over time; EL2 fell faster than EL1.

Item #3: Spring 1971 to Fall 1971

Further training effects appeared during this period. EL1 and EL2 reversed the negative effect noted above. Their work team relations improved significantly over time, rising above pre-training levels. Although EL3 and EL4 also improved in this comparison, the change was not statistically significant.

Item #3: Fall 1971 to Spring 1972

EL1, 2, 3, and 4 all stabilized over this period and showed no effects attributable to AMA training. The addition of the Control LEA's here demonstrates no significant differences over time between the Experimental LEA's and the Control groups. A significant difference between EL3 and Control EL2 appears, but because no significant difference is shown over time, no training effect can be attributed.

Item #3: Fall 1970 to Spring 1972

An analysis of the levels of favorable work relations before training and almost a year afterward reveals no significant changes over time among the four Experimental LEA's. A significant difference does appear between EL1 and EL2 (holding time constant), but no significant change appeared over time and thus no effects of AMA training are ascribed. In summary, then, the LEA's on this item remained approximately stable throughout our research periods.

Item #4: Fall 1970 to Spring 1971

Item #4, I really feel my immediate work group is getting things done, attempts to measure the degree to which persons feel their work groups accomplish results. A T1-T2 comparison on this item shows a significant negative training effect between EL1 and EL2 over time. These two school districts declined in a statistically significant way in the degree to which they believed they were accomplishing results. EL3 and EL4 remained relatively stable over this period, showing no training effects.

Item #4: Spring 1971 to Fall 1971

A resurgence occurs in this period in EL1 and EL2. Over time, both school districts attained levels higher than their pre-training scores. This produced a positive training effect. EL3 and EL4 continued to show no training effects in this comparison.

Item #4: Fall 1971 to Spring 1972

No significant movement occurs over this time in any LEA. Consequently no training effects can be ascribed. The addition of the Control LEA's shows no significant differences between the LEA's, either holding time constant or over time. In general, all the Experimental LEA's typically stabilized during this comparison.

Item #4: Fall 1970 to Spring 1972

A comparison of the Experimental LEA's pre-training responses with those a year after training indicates no significant effects as a result of AMA training. The amount of work people felt they were accomplishing remained nearly the same: All LEA's experienced general stabilization and returned to their pre-training levels by Spring 1972.

Item #5: Fall 1970 to Spring 1971

Asking When differences arise in my work group, we have good ways for settling them ourselves, Item #5 attempts to measure the degree to which people believe conflict can be constructively resolved within their work groups. A T1-T2 comparison shows no significant training effect on this item. The respondents generally saw themselves in the same relative position on this issue before and immediately after training. No negative or positive training effects occurred.

Item #5: Spring 1971 to Fall 1971

Between EL1 and EL2, this comparison shows a significantly positive effect of AMA training over time. A consistent pattern appears in both LEA's in a T2-T3 comparison. The ability of work groups to handle conflict improved significantly between Spring and Fall 1971. EL3 and EL4 also follow a pattern that is linked to their general management team relations, and they show no change over time or between themselves.

Item #5: Fall 1971 to Spring 1972

It appears that the rapid improvement in conflict management in EL1 and EL2 reverses itself in a T3-T4 comparison. When these LEA's are compared with the Control group, however, a positive effect of AMA training emerges. While both Experimental LEA's are dropping, the Control LEA is falling at a faster rate. As we have indicated before, this data must be interpreted cautiously because of the lack of pre-training data for the Control LEA. But EL3 and EL4 again demonstrate no effect of training when compared with each other or with the Control LEA.

Item #5: Fall 1970 to Spring 1972

A comparison of pre-training data with data recorded in T4 indicates no effects of AMA training on this item. Groups in these school districts were apparently no better able to handle conflict in their work groups after training than before. No significant changes were recorded either between the LEAs or over time.

DATA SUMMARY

Management Team Relations

Fall, 1970 - Spring, 1972

Item	Type of Data QUESTIONNAIRE	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
1	My work group works hard to achieve its goals.		EL1,EL2, EL3,EL4	
2	My work group understands what we are trying to achieve.		EL1,EL2, EL3,EL4	
3	I feel my group works well together.		EL1,EL2, EL3,EL4	
4	I really feel my immediate work group is getting things done.		EL1,EL2, EL3,EL4	
5	When differences arise in my work group, we have good ways for settling them ourselves.		EL1,EL2, EL3,EL4	

These five items were designed to measure the extent to which the AMA's process goals for the development of a management team were accomplished. The longitudinal perspective of this study clearly indicates that AMA training did not influence the team relations in these school districts either positively or negatively.

Items #1 and #2, which refer specifically to the clarity of goals within work groups, reveals that EL1's groups understood most clearly their aims. All the LEA's experienced limited growth in their knowledge of expected results, but in no case was this significant enough to attribute to AMA training.

Items #3, #4, and #5 were designed to reflect the attitudes of group members regarding their ability to work together and to resolve emergent conflicts. Again we find a pattern of general stabilization over time; all the LEAs have reverted to their approximate pre-training levels by the Spring of 1972.

Our overall conclusion regarding this category of variables is that AMA training simply has no effect on modes of personal relations within work groups in the organizations that are trained. In many cases, LEA's showed low mean scores in the immediate post-training period, which over the course of the second year of this evaluation regained their pre-training levels.

Section 4: Summary and Conclusions

Our purpose in Chapter Five was to evaluate the extent to which the AMA training process affected the internal health of the Experimental organizations. The AMA has specific process goals for leadership climate, decisionmaking, and management team relations which we wished to evaluate.

An attempt is made in the training design to instill modern concepts of management, including the development of strong patterns of leadership which support the organization's goals; decentralization of decisionmaking so that people who are responsible for decisions actually make them; and the development of teams of managers who can work together constructively to achieve the goals of the organization (which should be the goals of the team).

The importance of these intervening variables was established earlier. Our purpose here is not to provide further evidence of their central place in the transformation of training input into planning output. We intend now to determine to what extent AMA has been able to affect positively these variables. Has training bred an organizational environment into which the team planning process can successfully be introduced?

SUMMARY OF ATTITUDINAL FINDINGS

INTERVENING VARIABLES - STATE DEPARTMENT OF EDUCATION

Fall, 1970 - Spring, 1972

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
	LEADERSHIP CLIMATE QUESTIONNAIRE			
1	Based on information I have received from my boss, I know if I am measuring up in my job.	E1		E2
2	My manager encourages and supports innovation.	E1		E2
3	Higher management's reactions to the problems which reach them are fair.	E2	E1	
4	My manager knows and understands the problems I face.	E1		E2
5	My manager recognizes when a problem is developing and does something constructive about it.	E1		E2
6	My manager shows confidence and trust in me.	E1		E2
	DECISIONMAKING CONTENT			
1	Involvement in Decisionmaking in the State Department		E1,E2	
2	Quality of Decisionmaking in the State Department	E1,E2		
3	Influence of Planning on decisionmaking process		E1,E2	
	QUESTIONNAIRE			
4	The people I work with participate appropriately in setting the goals of our work.	E1		E2
5	I am appropriately involved in decisions affecting my work.	E1,E2		

SUMMARY OF ATTITUDINAL FINDINGS (cont'd)

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
6	I can influence the goals, methods, and activities of my organization.		E1,E2	
	MANAGEMENT TEAM RELATIONS			
	CONTENT			
1	Promote cooperative teamwork		E1	E2
2	Amount of cooperative teamwork	E1	E2	
	QUESTIONNAIRE			
3	My work group works hard to achieve its goals.	E1,E2		
4	My work group understands what we are trying to achieve.		E1	E2
5	I feel my group works well together.	E2	E1	
6	I really feel my immediate work group is getting things done.	E1		E2
7	When differences arise in my work group, we have good ways for settling them ourselves.	E2	E1	

Mixed effects of training on the SED intervening variables appear. Except for items associated with leadership climate, no clear trends are apparent when one scans the data summary charts. But subsequent examination reveals two definite patterns, each connected with an Experimental State.

One pattern which becomes evident is the positive effects attributable to training in E1. Items related to the three categories reveal that, while the AMA did not affect many of them, it had positive effects on some and negative effects on none. After training, leadership climate improved most. Persons in that organization felt better about their management team's leadership style after training, and this improvement was sufficient to be defined as a positive training effect in five of the six items associated with this category.

The other pattern which emerges is the continual negative impact of training on E2's intervening variables. Items associated with leadership climate, decisionmaking and management team relations were adversely affected by training in E2. This negative consistency does not augur well for planning (which will be evaluated as an end result variable in Chapter Six). What may be harmed are future plans to be, or not to be, developed, as well as the potential support of people in the organization--a prerequisite of transforming paper plans into action plans.

SUMMARY OF ATTITUDINAL FINDINGS

DATA SUMMARY

INTERVENING VARIABLES - LOCAL EDUCATION AGENCIES

Fall, 1970 - Spring, 1972

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
	QUESTIONNAIRE			
	LEADERSHIP CLIMATE			
1	Based on information I have received from my boss, I know if I am measuring up in my job.		EL1,EL2 EL3,EL4	
2	My manager encourages and supports innovation.		EL1,EL2, EL3,EL4	
3	Higher management's reactions to the problems which reach them are fair.		EL1,EL2, EL3,EL4	
4	My manager knows and understands the problems I face.		EL1,EL2, EL3,EL4	
5	My manager recognizes when a problem is developing and does something constructive about it.		EL1,EL2	EL3,EL4
6	My manager shows confidence and trust in me.		EL1,EL2, EL3,EL4	
	DECISIONMAKING			
1	The people I work with participate appropriately in setting the goals of our work.		EL1,EL2, EL3,EL4	

SUMMARY OF ATTITUDINAL FINDINGS (cont'd)

Item	Type of Data	IMPACT OF TRAINING Positive Effect	No Effect	Negative Effect
	QUESTIONNAIRE			
2	I am appropriately involved in decisions affecting my work.		EL1,EL2, EL3,EL4	
3	I can influence the goals, methods, and activities of my organization.		EL1,EL2, EL3,EL4	
	MANAGEMENT TEAM RELATIONS			
1	My work group works hard to achieve its goals.		EL1,EL2, EL3,EL4	
2	My work group understands what we are trying to achieve.		EL1,EL2, EL3,EL4	
3	I feel my group works well together.		EL1,EL2, EL3,EL4	
4	I really feel my immediate work group is getting things done.		EL1,EL2, EL3,EL4	
5	When differences arise in my work group we have good ways for settling them ourselves.		EL1,EL2, EL3,EL4	

LEA

Turning to the Local Educational Agencies (LEA's) in our analysis of the effects of AMA training on the intervening variables, we are faced with striking results. With only two exceptions, no statistical evidence of AMA training effect appeared in the Experimental LEA's; the two effects recorded were negative. In other words, the two LEA's in question were worse off after training on these items than they had been before training.

Our analysis makes it quite clear that the AMA training program simply does not have any significant effect over time on these variables. This is not to say that the Experimental organizations do not practice these management techniques; in fact, at least one LEA evinced a consistent pattern of very high mean scores on most items. Our results do say that, if an organization practices competent management techniques before AMA training, it will continue to practice them afterward, showing no appreciable effect from the AMA process. On the other hand, an organization with a low level of managerial skills will not benefit from AMA training, either. It may well continue to preserve dysfunctional management patterns.

In closing, we must point out again that, while we have confidence in our findings, we caution readers to remember that the research design upon which our conclusions are based is not as powerful as we would like. As discussed in Chapter Two, a research design that lacks a pre-training Control Group test has limitations. However, the addition of the Control LEA's in the T3-T4 comparison gives us confidence in these conclusions that nearly equals our faith in the conclusions regarding the SED data.

Overall Conclusion

The effects of training on the Educational Agencies' intervening variables are diverse enough to defy absolute interpretation. Positive, negative, and no effects are spread across the items and organizations without any dominant pattern.

No brief statement could accurately describe what we observed concerning the intervening variables, and a longer explanation would violate the purpose of a summary. It can be argued that any movement in this complicated area indicates a successful AMA intervention. But if we assume (as we must) that AMA wanted to create positive training effects upon these organizations' intervening variables, then the results and conclusions are indeed mixed. For the AMA partially succeeded, they partially failed, and in part they showed no effect at all.

Training influenced the "internal state and health" of each organization in different ways. Yet if we categorize, and perhaps oversimplify, the data by organization, then the terms "success," "failure" and "no effect" assume more meaning. It then becomes evident that training influenced the intervening variables of E1 positively, E2 negatively, and of the four LEA's hardly at all. The AMA produced one set of successful results out of six possible opportunities.

CHAPTER SIX

END RESULT VARIABLES

Overview

The central concern of this evaluation is the impact of the AMA training program. We have defined "impact" in two ways. In the chapter on causal variables, we viewed it as satisfaction of the AMA goal criteria, ranging from defining the institution's mission to designing an evaluation methodology. "Impact" became improvements in the internal decisionmaking process and organizational climate in the intervening variables chapter.

Now we define "impact" in still another, and perhaps most important, way. This chapter on end result variables examines impact as the "achievements of the organization,"[1] such as services provided or goods produced. Given change or lack of change in the causal and intervening organizational variables, how has AMA training affected what the educational agencies actually produce for their own use or their clients' benefit?

Improvements in how an institution makes strategic action assignments or deals with interpersonal conflict are essential to organizational planning and growth, but such improvements can be considered as a means to another end: the design and implementation of a long-range strategic plan.[2] Unless plans are being written, other efforts to build an effective educational planning process become virtually meaningless.

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[1] Rensis Likert, The Human Organization (New York: McGraw-Hill, 1967), p. 29.

[2] American Management Association, "Feasibility and Pilot Programs Proposal: Adapting and Testing Business Management Development Programs for Educational Administrators" (mimeograph), June 22, 1970, pp. 4-5. The 14th criterion on which the AMA program was to be evaluated was the extent to which the experimental agencies had "produced and are implementing a long-range strategic plan."

Furthermore, we should study the extent to which administrative objectives specified in the plan are being achieved. While plans constitute a legitimate output of the training, they are clearly a means to the end of being able to measure progress toward the agency's administrative objectives. To be sure, plans must exist before progress can be made toward objectives. But measurable progress is a better test of AMA training effectiveness than plans alone are. Asserting that the ESED will "By September 1971 assist in the establishment of 35 new Kindergarten-Early Childhood Education Centers" is one thing; being able to show that this objective has been accomplished shows AMA training impact of a higher order. Without measurable progress, plans may be worthless paper. Both plans and progress are appropriate end-result variables but one is a more substantial end result than the other.

Even plans and progress toward administrative objectives are not the last links in this extended means-ends chain. An ultimate test of the worth of the AMA program would be "the output of the system measured in terms of the skills and aptitudes transmitted to students in the educational systems."[3] But while many objectives are written for student outcomes, evaluating whether they are being achieved is premature at this time.

We can look at progress toward some student objectives more than a year after training ended (especially on the strategy level). Yet a more comprehensive judgment of effects of the AMA team planning process on the education of students must wait until the agencies have had ample time to implement the objectives enumerated in their action plan. Rensis Likert identified this problem in his own studies:

> . . . the time intervals required before both productivity began to increase and before the situation reached a state of relative equilibrium was appreciably longer than those conducting the work had expected. Changes in the causal variables . . . apparently require an appreciable period of time before

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[3] Jesse Burkhead (with Thomas G. Fox and John W. Holland), Input and Output in Large City High Schools (Syracuse: Syracuse University Press, 1967). See also: Raymond E. Klawuhn and Alexander J. Basso, "Final Report: Adapting and Testing Business Management Development Programs for Educational Administrators" (mimeograph), Jan., 1972, p. 30.

> the impact of the change is fully manifest in corresponding improvement in the end result variables.[4]

Time becomes an even more important factor when the objectives are not scheduled for completion until *after* our evaluation is published; most of the student behavioral objectives in these plans are not expected to be reached until after we go to press. A report written in mid-1972 cannot too precisely assess the extent to which ESED #2 has accomplished this goal: "By 1977, 85% of all 15 year old students will demonstrate computational skills as determined by appropriate criterion referenced tests." Our concern will be, therefore, to measure progress *toward* goals.

This is not to suggest a need for a Y3 evaluation program. Making strategic action assignments is an essential precondition for the design of long-range plans. Likewise, an assessment of plan quality and preliminary indications of early progress toward its administrative realization provide a clue to future developments and directions.

> . . . the available evidence indicates that there are consistent and dependable relationships among the causal, intervening, and end result variables. When all of the relevant factors are taken into consideration, especially time, and the proper analyses made, consistent positive relationships can be expected among the causal, intervening, and end result variables in every organization.[5]

Therefore, this chapter (1) compares selected plans with established criteria for good planning and (2) reviews progress toward those objectives and strategies with approximate completion dates.

Chapter Six is divided into five (5) sections. The first three (3) concentrate on the ESED's. Section 1 evaluates the plans themselves while Section 2 measures progress toward objectives. For purposes of logical presentation, we title Section 1 "Intermediate Output" and Section 2 "Final Output."

Section 3 reviews the extent to which persons within the ESED's feel they have produced a long-range strategic plan, as well as what progress they sense has been made toward the objectives of the plan.

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[4] Likert, *op. cit.*, pp. 80-81.

[5] *Ibid.*, pp. 98-99.

Section 4 focuses on the Experimental LEA's. Here we evaluate the plans produced as a result of AMA training, against the same criteria used for the ESED's. We also look at what participants think about the plans, and offer conclusions on the impact of AMA training on LEA end-result variables.

Section 5 integrates conclusions from previous sections. It presents the overall conclusions of the research team and a comprehensive summary of our findings and analysis in this chapter.

Section 1: Intermediate Output/SED

To evaluate the plans produced by two Experimental State education agencies is no mean task. Each agency has numerous bureaus, sections, divisions, and offices. Attempting to study them all is beyond the resources of this research team. It would also be irrelevant to the actual status of the planning process in the Experimental agencies, since many units have not yet produced or completed action on their plans.

In order to obtain a representative sample of plans that would be fair to the agencies as well as consistent with the purposes of this evaluation, we chose to concentrate on the priority areas established by the ESED's.[6] Those were most likely to have been fully developed. Priority areas are usually accorded greater attention and more resources. If these plans were unsatisfactory, we could reasonably assume that goals with lower priority would be similarly weak. On this basis, the plans chosen for evaluation were those written for:[7]

ESED #1	ESED #2
Career Education	Early Childhood
Early Childhood	Human Relations
Reading	Reading

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[6] Priorities for ESED #1 are largely informal, while those for ESED #2 are formal and have been widely publicized throughout the educational system.

[7] Each state was asked to provide the research team with current plans for their priority areas. Plans were not received for ESED #1's Early Childhood Education program, so it cannot be included at this stage of analysis. Fortunately, its division director made a special report on progress toward objectives and strategies specified by the plan with proximate completion dates. This data will be used in the Final Output section.

Drawing on several sources, the research team developed criteria by which to assess the formal quality of these plans.[8] They encompass the essential elements of planning documents; each criterion bears upon the subsequent acceptance and success of the plan.

CRITERION	INDICATOR OF
1. Title:	serves to identify the program and its sponsoring/operating unit.
2. Identification:	persons *preparing* and *approving* plan. The person(s) assigned responsibility for implementing a plan will want to know the names of the persons who prepared the plan in case he needs their assistance. It is also useful to know by whose authority the plan has been approved. This will give implementers some indication of the importance of the plan as well as give it organizational legitimacy.
3. Needs Assessment:	short statement of the unmet needs for which the plan is designed. A need is the difference between current conditions and conditions that are desired. A clear needs assessment provides the rationale for the plan's existence and states its contribution to meeting the need.

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[8] Primary source was Preston P. LeBreton and Dale A. Henning, *Planning Theory* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1961).

Secondary sources included Robert N. Anthony, *Planning and Control Systems: A Framework for Analysis* (Boston: Harvard University Press, 1965); Bertram M. Gross, *Organizations and their Managing* (New York: The Free Press, 1968); Daniel Stufflebeam et al., *Educational Evaluation and Decision Making* (Bloomington, Indiana: Phi Delta Kappa, Inc., 1971); Joseph S. Wholey et al., *Federal Evaluation Policy* (Washington, D.C.: The Urban Institute, 1970).

Organizational Documents included Joe Wolvek, *Comprehensive Planning in State Education Agencies* (Des Moines, Iowa: Iowa Department of Public Instruction, 1968); "Educational Needs Assessment: A Statewide Design for Texas" (Texas Education Agency, 1971); George Muench et al., "Educational Goals and Objectives" (California School Boards Association, 1969).

	CRITERION	INDICATOR OF
4.	Recommendations:	enumeration of what ought to be done to meet identified needs. Recommendations may be short- or long-range, timeless or continuous in nature. Recommendations should be organized into a means-ends chain linking broad statements of purpose (mission), intermediate goals (continuing and specific objectives) and specific methods for achieving them (strategies). Closely connected with, if not included in, recommendations are the following plan elements:
5.	Expected Results:	anticipated payoffs from the adoption of any recommendations expressed in measurable terms, specifying *who* will benefit (clients) and by *how much.* This serves as a standard by which to evaluate success of the plan. It also justifies the resources requested to implement it.
6.	Time Frames:	an indication of when recommendations are to be *implemented* and when they are expected to be *complete*. While less important than the completion date, the implementation date indicates the time available to management to prepare themselves before action on the plan. The completion date serves as another basis on which to evaluate the plan; a comparison of actual and expected completion dates is an indicator of plan quality.
7.	Responsibility:	assignment of each recommendation to a specific person(s) group(s), or operating unit(s). Objectives assigned to everyone frequently become the responsibility of no one.
8.	Resource Requirements:	an estimate of the personnel, money, material, or information needed to attain each recommendation. Provides superiors with some indication of how much the plan might cost, as well giving a basis on which to compare: (a) expected results with costs (cost/benefit study) (b) alternative uses of the same resources

CRITERION	INDICATOR OF
9. Evaluation Strategies:	methods used to measure progress toward recommendations. An attached evaluation strategy gives persons responsible for plans (and those to whom they are responsible) reliable data on the extent to which recommendations are attained. Lack of such strategies makes it difficult to separate programs that work and should be funded from those that do not and must be eliminated.
10. Rationale:	justification for elements in the plan. The purpose is to provide answers to possible questions about the plan. Rationale can focus on what recommendations will accomplish, justify a plan's cost, or explain the time frames or responsibility center. Any supporting data or narrative that could clarify doubts on these issues should be presented.

Analysis

Each available plan is compared with the above criteria. To simplify analysis, each plan is rated on a "yes" or "no" basis as to whether or not it meets each criterion. A "yes" does not necessarily mean complete success, nor does a "no" indicate total failure. They do indicate whether most of the plan fares well or poorly when held against the corresponding criterion. Therefore, plans should be compared only with the criteria, not with each other.

After the following schematic presentation, the analysis is briefly explained.

ANALYSIS OF ESED PRIORITY AREA PLANS

Spring, 1972

		ESED #1		ESED #2		
	CRITERIA	Career Education	Reading	Early Childhood	Human Relations	Reading
		ANALYSIS				
1.	Title	Yes	Yes	Yes	Yes	Yes
2.	Identification	No	No	No	No	Yes
3.	Needs Assessment	Yes	Yes	Yes	Yes	No
4.	Recommendations	No	Yes	Yes	Yes	Yes
5.	Expected Results	Yes	Yes	Yes	Yes	Yes
6.	Time Frames	Yes	Yes	Yes	Yes	Yes
7.	Responsibility	No	No	No	No	Yes
8.	Resource Requirements	No	No	No	No	Yes
9.	Evaluation Strategies	No	Yes	No	No	No
10.	Rationale	No	No	No	No	No
		Yes=4 No =6	Yes=6 No =4	Yes=5 No =5	Yes=5 No =5	Yes=7 No =3

Comments

Both ESED's produced moderately acceptable plans. Both sets of recommendations were written according to AMA specifications, expressing missions/continuing objectives/specific objectives in behavioral terms.[9] All plans include expected results and time frames, in varying degrees.[10]

By breaking out its objectives and strategies in separate sections and clearly displaying time frames, ESED #1's plan is superficially clearer. But ESED #2 has the advantage of giving more detail about why the plans are needed, as well as other general explanations.

Neither state was very specific about resources required to achieve each objective/strategy, though the costs of recommended programs were somewhat considered.[11] The research team has seen budget documents from both states, but these are separate from the state's plan. It would have been advantageous to attach a price tag and manpower requirements to each objective/strategy in the plan, rather than to isolate costs from recommendations in separate documents.

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[9] The plan for ESED #1's Career (Occupational) Education division contains two (2) sets of continuing objectives; one is timeless while the other sets specific dates. No specific objectives are listed.

[10] As mentioned previously, ESED #2's plan follows the AMA format for internal purposes only. For communicating with external constituencies, particularly the State Board, it has largely abandoned the AMA breakdown of mission/continuing objectives/specific objectives, etc. in favor of narrative descriptions of programs and non-behavioral goals and objectives. To keep plans consistent, the ESED #2 internal plan was used for comparison with the criteria; as was ESED #1's plan.

[11] In ESED #1, each plan has a heading "Required Personnel, Equipment, Etc." But under each heading, generalized action assignments like "staff" or "selected project personnel" appear rather than hard data on costs. Its career education plan makes a limited attempt to specify amount of "required staff time" beside objectives.

The evaluation strategies suggested were also weak. Often the evaluation strategy listed was expressed in vague, general terms like "appropriate criterion-referenced test." Elsewhere the objective/strategy consisted of persons completing a program, receiving money, or meeting other task completion inventories, so no elaborate evaluation strategy was inevitable. A few evaluation strategies, although listed in the planning document, were not attached to the objectives/strategies they might have tested. Both states included future production of appropriate measures among their other objectives. The situation may thus improve once evaluation strategies are developed.

Proper identifications were rarely made. A few plans implied who might have prepared or approved the plan, yet seldom was this explicit.[12] Neither state detailed the rationale for choosing one objective over another.

Needs Assessments were often in prose form accompanied by modest empirical evidence. In some plans, however, it was difficult precisely to delineate the need because current conditions were not stated. For example, one ESED might have said that 85% of its students should be able to use reading as a communications skill. The agency did not say what percent can read now. This omission gives no idea of what percentage gap must be closed between the present and future expectations.

Section 2: Final Output

At this point in time, after the conclusion of AMA training, final output has been appropriately defined as measured progress toward selected objectives/strategies that are specified in the plans. Attitudinal data reveal how much progress participants feel they have made toward achieving their own objectives/strategies.

The research team faced the same proliferation of plans in this section as in the last. Since across-the-board assessments of final output were impossible, we decided to concentrate on the priority areas. Each ESED was asked to provide us with a current status report on their priority-level plans.

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[12] The Division of Languages in ESED #1 (which includes the reading priority) clearly states who approved the divisional plan.

Unfortunately, ESED #1 gave us a status report in Early Childhood Education while ESED #2 refused to give us any at all.[13] Aside from the fact that the Early Childhood project reports that its programs are on schedule and that most of what it set out to accomplish has been accomplished, not much detail can be added. We cannot generalize beyond Early Childhood to other programs in ESED #1; we obviously cannot do so in ESED #2.

This data gap is regrettable given the importance of measurable progress as an index of AMA program quality. But the attitudes expressed about objective progress offer some subjective evidence.

Section 3: SED Attitudinal Data

Plans and progress toward them can also be assessed attitudinally. What do people inside the organization feel about the plans with which they work? How far do these individuals think the SED has gone in attaining their objectives? What has been done, in their opinion, to produce operable plans and transform them into genuine educational benefits?

The research team organized the data relevant to these issues into two general categories:

A. Development of a long-range strategic plan

B. Progress toward Goal Achievement

Content categories and questionnaire items measured individual beliefs on these crucial matters. We have already compared selected plans with established criteria and have attempted, albeit unsuccessfully, to report on progress toward attainment of objectives. No matter what the research team concludes, however, unless people within the organization believe that a workable plan has been written and that progress has been made toward it, the life expectancy of the plan is short.

The method of presentation of content and questionnaire data is identical to that followed in Chapters Four and Five; the research team sees no compelling need to re-introduce them here. Any exceptions are clearly marked.

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[13] Responding to our request for a report on current progress toward objectives, the Coordinator of Planning wrote that "the Executive Staff will be unable to devote the time and energy required to complete the multi-page report. General reaction across the Department is basically unfavorable to additional non-productive work of this type" (24 April 1972).

A. Development of a Long-Range Strategic Plan

1. Produce and implement a long-range strategic plan.

   Interview Question: What do you feel you will obtain (have obtained) from AMA training?

   Range of Scale Possibilities: (1) no value to (7) maximum value.

   States: E1, E2.

   Points of Time: T1, T2, T3, T4.

2. My organization's overall plan is operable.

   Points of Time: T1, T2, T3, T4.

Item 1 : Produce and Implement a Long Range Plan

Fall, 1970		Spring, 1971		Fall, 1971		Spring, 1972	
E_1 & E_2		E_1 & E_2		E_1 & E_2		E_1 & E_2	
N 5	N 10	N 10	N 10	N 7	N 8	N 7	N 9

Kruskal-Wallis One-Way Analysis of Variance

H= 0.633 Sig.= NS	H= 0.321 Sig.= NS	H= 0.0134 Sig.= NS	H= 2.868 Sig.= NS

Binomial Test of Proportions

P=0.002 Sig.= .01	P= .762 Sig.= NS	P= .872 Sig.= NS	P=0.430 Sig.= NS

Fall 1970 to Spring 1972			
E_1 & E_1		E_2 & E_2	
N 5	N 7	N 10	N 9

Kruskal-Wallis One-Way Analysis of Variance

H= 0.5340 Sig = NS	H= 10.1400 Sig.=.01

Binomial Test of Proportions

P= 0.005 Sig.= .01	P= 0.10 Sig.= NS

Item 2 My organization's overall plan is operable.

	Fall, 1970			Spring, 1971			Fall, 1971			Spring, 1972		
	T1			T2			T3			T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	39	5.079	1.132	73	4.821	1.456	68	5.411	1.318	40	5.175	1.278
Experimental SED#2	59	4.203	1.648	52	4.096	1.375	45	4.822	1.402	39	4.256	1.463
Control SED#1	64	5.203	1.210	64	4.500	1.447	67	4.895	1.232	59	4.610	1.450
Control SED#2							61	4.737	1.662	66	4.545	1.337
Total	164			188			241			205		

Two Way Analysis of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif
Experimental SED#1	Col.	7.207	.01	8.802	.01	2.175	NS	1.782	NS
W/Control SED #1	Row	0.300	NS	6.368	.05	9.328	.01	1.400	NS
Experimental SED#1	Col.					1.290	NS		
W/Control SED #2	Row					11.914	.001		
Experimental SED#2	Col.			9.421	.01	4.795	.05		
W/Control SED #1	Row			1.705	NS	1.207	NS		
Experimental SED#2	Col.					3.327	NS		
W/Control SED #2	Row					0.242	NS		

Item #1 concerns the attitudes of top management personnel in the two SEDs toward their past AMA training. Specifically we were interested in whether they felt their agencies were producing and implementing a long range plan (the fourteenth training goal originally listed by the AMA).

An analysis of their responses over the eighteen months of this evaluation project revealed no significant differences between the states in the degree of emphasis given this item. There was a significant difference of awareness prior to training between E1 and E2; more top managers expected to develop a long-range plan in E2 than was the case in E1.

A comparison within the states does reveal a significantly negative training effect in State E2. Expectations of managers in that state agency were frustrated when the plan they expected to produce as a result of AMA training did not materialize as they had hoped.

State E1 showed no significant training effects. There, managers' expectations regarding a long-range plan, low to begin with, were not disappointed.

Item #2: Fall 1970 to Spring 1971

My organization's overall plan is operable was asked over the entire eighteen months of this project. A T1-T2 comparison reveals negative training effects in both SED's. State E1 and State E2 both experienced declines in the degree to which personnel of these departments felt they had workable plans. Their declines were sharper than the one shown by the Control State. Both states, then, were significantly less certain of the feasibility of their plans after AMA training than before it.

Item #2: Spring 1971 to Fall 1971

In this comparison, a reversal of the trend that developed over the immediate pre/post-training periods occurred. All the SED's experienced a resurgence in the extent to which people believed in their plans. E1 and E2 developed a greater degree of stabilization over time than did the Control State, and consequently displayed a positive training effect.

Item #2: Fall 1971 to Spring 1972

Over this period, all the states fell off in the degree to which their plans were seen as operable, but in no case did they drop to their T2 levels. E1 differed significantly from both Control 1 and Control 2 (holding time constant), but E1 evidenced no significant change over time. State E2 registered a negative training effect. Personnel there lost faith in their plans much faster than the staff of Control State 1. This also produced a significant difference between State E2 and Control 1 when time was held constant.

Item #2: Fall 1970 to Spring 1972

From the longitudinal perspective of this report, AMA training had no effect on the attitudes of Experimental States' personnel toward their plans. By Spring 1972 State E1 and E2 had both returned to their approximate pre-training attitudinal levels. State E2 continued to show a significant disparity between itself and Control State 1, holding time constant, but no change occurred over time between these two states. Thus no training effect is shown.

DATA SUMMARY

Development of a Long-Range Strategic Plan

Fall, 1970 - Spring, 1972

	Type of Data	IMPACT OF TRAINING		
Item	CONTENT	Positive Effect	No Effect	Negative Effect
1	Produce and implement a long-range strategic plan.		E1	E2
	QUESTIONNAIRE			
2	My organization's overall plan is operable.		E1,E2	

The two items designed to measure attitudes toward this AMA training goal indicate that, for the most part, AMA training did not affect staff attitudes about producing a feasible plan for their agencies.

The one effect recorded here indicated that the managers in State E2 felt worse about their agency's overall plan after training than before.

These two items indicate that, from a longitudinal perspective, personnel of both states have not seen any evidence to increase their enthusiasm for their agencies' overall plans. Managers in E2 have apparently found reason to decrease their faith in the agency plan.

B. Progress Toward Goal Achievement

1. Number of objectives toward which progress has been made.

Range of Scale Possibilities: (1) no objectives to (7) many objectives.

2. Level of progress toward those objectives.

Range of Scale Possibilities: (1) no progress to (7) much progress.

Both these items were based on the following:

Interview Question: Toward what action plan objectives has measurable progress been made by your division?

States: E1, E2, C1.

Points of Time: T3, T4.

The questionnaire item is:

3. As I see it, my organization has made progress in attaining its objectives.

Points of Time: T3, T4.

Item 1 : Number of objectives toward which Progress has been made.

Fall, 1971			Spring, 1972		
E_1 & C_1	E_2 & C_1	E_1 & E_2	E_1 & C_1	E_2 & C_1	E_1 & E_2
N 9 N 11	N 10 N 11	N 9 N 11	N 9 N 11	N 10 N 11	N 9 N 10
Kruskal-Wallis One-Way Analysis of Variance					
H=1.213 Sig.= NS	H=0.019 Sig.= NS	H= 1.213 Sig.= NS	H=3.753 Sig.= NS	H=0.044 Sig.= NS	H=3.081 Sig.= NS
Binomial Test of Proportions					
P=1.000 Sig.=NS	P=1.000 Sig.= NS	P= 1.000 Sig.=NS	P=1.000 Sig.= NS	P=1.000 Sig.=NS	P= 1.000 Sig.= NS

Fall, 1971, to Spring, 1972		
E_1 & E_1	E_2 & E_2	C_1 & C_1
N 9 N 9	N 10 N 10	N 11 N 11
Kruskal-Wallis One-Way Analysis of Variance		
H= 0.779 Sig.= NS	H=0.005 Sig.= NS	H=0.052 Sig.= NS
Binomial Test of Proportions		
P= 1.000 Sig.= NS	P=1.000 Sig.= NS	P=1.000 Sig.= NS

Item 2 : Level of Progress toward those Objectives.

Fall, 1971						Spring, 1972					
E_1 & C_1		E_2 & C_1		E_1 & E_2		E_1 & C_1		E_2 & C_1		E_1 & E_2	
N 9	N 11	N 10	N 11	N 9	N 11	N 9	N 11	N 10	N 11	N 9	N 10
Kruskal-Wallis One-Way Analysis of Variance											
H=1.213		H=0.447		H=1.213		H=4.688		H= 0.100		H=4.335	
Sig.= NS		Sig.= NS		Sig.= NS		Sig.= .05		Sig.= NS		Sig.= .05	
Binomial Test of Proportions											
P=1.000		P=1.000		P= 1.000		P=1.000		P= 1.000		P=1.000	
Sig.= NS		Sig.=NS		Sig.= NS		Sig.=NS		Sig.= NS		Sig.= NS	

Fall, 1971 to Spring, 1972					
E_1 & E_1		E_2 & E_2		C_1 & C_1	
N 9	N 9	N 10	N 10	N 11	N 11
Kruskal-Wallis One-Way Analysis of Variance					
H=1.996		H=1.000		H= 0.107	
Sig.= NS		Sig.= NS		Sig.=NS	
Binomial Test of Proportions					
P=1.000		P=1.000		P=1.000	
Sig.= NS		Sig.= NS		Sig.=NS	

Item 3 As I see it, my organization has made progress in attaining its objectives.

	Fall, 1971 T_3			Spring, 1972 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.411	1.340	40	5.325	0.888
Experimental SED#2	45	4.866	1.341	40	4.775	1.349
Control SED #1	67	5.253	1.146	61	5.114	1.239
Control SED #2	61	5.295	1.256	66	5.090	1.063
Total	241			207		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED #1	**Col.**	0.504	NS
W/Control SED #1	**Row**	1.314	NS
Experimental SED #1	**Col.**	0.859	NS
w/Control SED # 2	**Row**	1.248	NS
Experimental SED #2	**Col.**	0.430	NS
w/Control SED #1	**Row**	4.271	.05
Experimental SED #2	**Col.**	0.726	NS
w/Control SED #2	**Row**	4.596	.05

Measurable progress toward objectives has been stressed here as an important index of the effectiveness of AMA training. In Fall 1971 and again in Spring 1972, we asked top managers in each state what action plan objectives they had made measurable progress toward. We were interested in the number of objectives they mentioned as well as the level of progress indicated, and anticipated both indices would increase with time.

Item #1 concerns the number of objectives toward which progress has been made, in the opinion of the top managers. An analysis of this item shows no change between the Experimental States and the Control SED during the two points in time at which this question was asked. No statistical differences exist either between the Experimental SED and the Control or between the Experimental SED's themselves. A comparison over time within the states also shows no differences. During the year after training, no real movement occurred in terms of the number of objectives toward which progress was made.

Item #2 is concerned with the extent to which those objectives (on which progress has been made) have been actually achieved. Only one significant difference emerges between the states. In the T4 comparison between E1 and E2, managers in E1 felt they had made more progress toward their objectives than did managers in E2. No training effects are indicated in this data, however, as none of the states significantly changed over time regarding the level of progress they were making.

Item #3: Fall 1971 to Spring 1972

Organizational attitudes toward Item #3, As I see it, my organization has made progress in attaining its objectives, is an important component in evaluating plan effectiveness. While E2 does not report any increases or decreases in the extent to which their objectives have been attained between Fall 1971 and Spring 1972, they have made less progress than either Control State. No difference exists between E1 and C1/C2 nor were any changes registered over time.

DATA SUMMARY

Progress Toward
Goal Achievement

Fall, 1970 - Spring, 1972

Item	Type of Data	IMPACT OF TRAINING: Positive Effect	No Effect	Negative Effect
	CONTENT			
1	Number of objectives toward which progress has been made		E1,E2	
2	Level of progress toward those objectives		E1,E2	
	QUESTIONNAIRE			
3	As I see it, my organization has made progress in attaining its objectives.		E1,E2	

The two interview Content items and the questionnaire item all indicated no training effects in either Experimental State. While State E1 made more progress than State E2, this difference cannot be attributed to AMA training because no statistically significant change occurred over time.

Expecting some change in the course of the year, the research team asked "Toward what action plan objectives has measurable progress been made by your division?" The obvious lack of movement seemed to be a direct result of the respondents' inability to point to any measurable progress concerning goal achievement. Most respondents thought that they had moved ahead, but few could specify any specific, measurable indications of progress.

DATA SUMMARY

End Result Variables -
State Education Department
Fall, 1970 — Spring, 1972

Item	Type of Data	IMPACT OF TRAINING: Positive Effect	IMPACT OF TRAINING: No Effect	IMPACT OF TRAINING: Negative Effect
	DEVELOPMENT OF A LONG-RANGE STRATEGIC PLAN			
	CONTENT			
1	Produce and implement a long-range strategic plan		E1	E2
	QUESTIONNAIRE			
2	My organization's overall plan is operable.		E1,E2	
	PROGRESS TOWARD GOAL ACHIEVEMENT			
	CONTENT			
1	Number of objectives toward which progress has been made		E1,E2	
2	Level of progress toward those objectives		E1,E2	
	QUESTIONNAIRE			
3	As I see it, my organization has made progress in attaining its objectives.		E1,E2	

The five items designed to measure respondents' attitudes in the SED's toward their overall plans as well as toward progress made in achieving the objectives laid down in those plans, indicate that the AMA training program had no positive impact on attitudes about these items. The one effect that was recorded showed a negative training effect in State E2, whose expectations about the development of a long-range plan were frustrated. Fewer managers mentioned this as an outcome of AMA training in the Spring of 1972 than had originally (before training) expected such planning.

All other items in this category displayed no training effects. Managers viewed their progress as being basically unaffected over the course of this evaluation. They were making no more, nor any less progress than they had been earlier.

As we mentioned above, one clear reason for this lack of apparent change in goal achievement seems based in the fact that few managers have developed adequate evaluation strategies. Thus they cannot be sure to what extent they are making progress.

Section 4: The Experimental LEAs

This section assesses the effect of AMA training on LEA end-result variables. We evaluate the actions taken and the plans produced by the LEAs after training. We seek to determine the extent to which these plans correspond to the criteria for a satisfactory plan that the ESEDs used. Secondly, we are interested in *attitudes* expressed by participants about end result variables. Due to lack of available data from LEAs, it will not be possible to systematically study progress toward objectives. But the two groups of data we do possess offer sufficient evidence on which to base some conclusions.

A. Action

To examine the plans, we asked the four (4) Experimental LEA's to forward current copies to us. ELEA's #1, #2, and #4 complied with this request; ELEA #3 did not.[14] Given the importance of actual output *after* training, this loss of data is unfortunate.

However, using the plans we were given, we are able to compare each of them to the criteria for analysis. Each plan was compared with the criteria, not with other plans. Hence no direct comparisons *should* be made between the plans themselves; because of unlisted gradations within the "yes" and "no" categories, no comparisons *can* be made. A "yes" in one category may signify complete success while a "yes" in another category may identify a borderline case. The plan with the most "yes" scores is not necessarily the best, and vice versa.

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[14] ELEA #1 sent a photocopy of their AMA plan as their "current" plan. The AMA plan was not very readable; it reflected an initial attempt at systematic planning and needed further refinement and editing. That the 14-month-old AMA plan is still regarded as the current plan indicates that little evolution in the planning process has occurred.

ANALYSIS OF ELEA PLANS

Spring, 1972

	Criteria	ELEA #1	ELEA #2	ELEA #3
		ANALYSIS		
1	Title	Yes	Yes	Yes
2	Identification	No	No	No
3	Needs Assessment	No	No	No
4	Recommendations	Yes	Yes	Yes
5	Expected Results	Yes	Yes	No
6	Time Frames	Yes	Yes	No
7	Responsibility	No	No	No
8	Resource Requirements	No	Yes	No
9	Evaluation Strategy	No	No	No
10	Rationale	No	No	No
		Yes=4	Yes=5	Yes=2
		No =6	No =5	No =8

Comments

The LEA plans were fairly consistent in their strengths and weaknesses. All demonstrated an ability to write behavioral objectives in a format with expected results and time frames; however, ELEA #4's second draft plan (used to construct the preceding diagram) met these criteria less well than did its first draft.[15]

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[15] ELEA #4 gave the research team two planning documents: "Current Planning Process--First Progress Report" and "Five Year Educational Master Plan--Second Draft." The first followed our criteria much more than the second. This gradual shift away from measurable objectives parallels a similar shift by the State Education Department after the adverse reaction of the State Board to such planning. The second draft offers more narrative explanations than the first but is more difficult to understand. As the latest version of the agency plan, the second draft was judged against our criteria.

Resource requirements and responsibility for implementation were partially incorporated into these plans, but not nearly enough to qualify as satisfactory. ELEA #2 attached more price tags while identifying fewer of the personnel responsible for accomplishment of goals.

Explanation of the need and rationale for various objectives/strategies as well as evaluation methods were particularly weak. Where suggested evaluations did appear, they were usually listed apart from the objectives they might have evaluated. To some extent this could be attributed to the absence of appropriate measures, although some evaluations were planned for some objectives in the future.

Overall, plans do not meet acceptable standards on as many criteria as they should. The addition of needs assessments, resource requirements, and evaluation strategies would improve them. Greater attention should also be paid to listing the personnel responsible for various parts of the plan.

B. Attitudes

Turning to attitudinal evaluation, we assess the same basic categories for the LEA's that were used for the SED's:

A. Development of a Long-Range Strategic Plan

B. Progress Toward Goal Attainment

Since interviews were not conducted in the LEA's in connection with this report, it is impossible to present Content data. Consequently, fewer items are associated with each category than was the case in analyzing the SED's.

Each item is displayed and explained, however, in a similar style; we need not repeat the elements in our examination. Again, any exceptions to what has gone before will be indicated.

End-Result Variables

A. Development of a Long-Range Strategic Plan

The questionnaire item is:

1. My organization's overall plan is operable.

Points of Time: T1, T2, T3, T4.

Item 1 : My organization's overall plan is operable

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	28	5.250	1.174	25	4.920	1.552	32	6.031	0.932	31	5.806	1.077
Experimental LEA #2	38	5.105	1.180	26	4.269	1.313	31	5.548	1.233	32	5.437	0.948
Experimental LEA #3	33	5.363	1.112	17	4.705	0.985	24	5.333	0.816	23	5.173	1.072
Experimental LEA #4	27	4.666	1.330	23	4.652	1.721	29	5.034	1.426	27	4.851	1.610
Control LEA #1							30	5.166	1.391	20	5.450	0.944
Control LEA #2							36	5.083	1.401	33	5.000	1.322
Total	127			91			182			167		

Two-Way Analysis of Variance		T_1 & T_2		T_2 & T_3			T_3 & T_4		T_1 & T_4	
		F	Signif.	F	Signif.		F	Signif.	F	Signif.
Experimental LEA #1 W/	Col.	5.762	.05	25.502	.001		0.799	NS	5.189	.05
Experimental LEA #2	Row	2.681	NS	5.735	.05		5.148	.05	1.733	NS
Experimental LEA #3 W/	Col.	1.537	NS	3.322	NS		0.448	NS	0.000	NS
Experimental LEA #4	Row	1.916	NS	0.405	NS		1.476	NS	4.174	.05
Experimental LEA #1 W/						Col.	0.018	NS		
Control LEA #1						Row	8.202	.01		
Experimental LEA #2 W/						Col.	0.150	NS		
Control LEA #1						Row	0.689	NS		
Experimental LEA #3 W/						Col.	0.278	NS		
Control LEA #2						Row	0.849	NS		
Experimental LEA #4 W/						Col.	0.265	NS		
Control LEA #2						Row	0.145	NS		

Item #1: Fall 1970 to Spring 1971

Item #1, My organization's overall plan is operable, was relevant to the four Experimental LEA's between Fall 1970 and Spring 1971, a period including the pre- and post-training intervals. After spending several weeks at Hamilton to learn the team planning process and develop an action plan for their school district, EL1 and EL2 felt their plans were less feasible after training than before. EL3 and EL4 also faltered in their opinion of current plans, but not substantially. Consequently, no training effects were assigned to EL3 and EL4 but the diminished felt practicability in EL1 and EL2 was sufficient to be due to negative effects of training. Although we are confident in these judgments, our conclusions would have been strengthened here by comparing scores in Experimental groups with Control group scores.

Item #1: Spring 1971 to Fall 1971

The negative training effects assigned T1-T2 were transformed into positive effects T2-T3 in the cases of EL1 and EL2. Both organizational plans were much improved during 1971--so much so that AMA credited with these increases. Gains recorded by EL3 and EL4 were insignificant, and training effects were not ascribed to either organization.

Item #1: Fall 1971 to Spring 1972

Analysis of changes and differences between Fall 1971 and Spring 1972 was validated by the presence of Control groups. Their addition made possible a more unambiguous analysis of training effects. EL1 felt better about their educational plans than either EL2 or the Control group; but this difference was due more to EL1's superiority remaining constant over time, than to significant changes in EL1, EL2, or CL1. No other changes or differences were recorded. The AMA training program, therefore, had no effect during this period.

Item #1: Fall 1970 to Spring 1972

The main advantage of a T1-T4 comparison was that it permitted a longitudinal evaluation of training impact. Negative or positive effects observed in interim periods may fade, or grow stronger, with time. Some effects may not appear until a year or two after training. In this case, the long view made it possible for us to hold that AMA exerted positive effects in EL1 and EL2 but none at all in EL3 and EL4. Plans were considered significantly more operational in EL1 and EL2 in Spring 1972 than they had been in the Fall, before training. A comparable increase did not occur in EL3 and EL4.

DATA SUMMARY

Development of a Long-Range
Strategic Plan

Fall, 1970 - Spring, 1972

Item	Type of Data QUESTIONNAIRE	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
1	My organization's overall plan is operable.	EL1,EL2	EL3,EL4	

B. Progress Toward Goal Achievement

The questionnaire item is:

1. As I see it, my organization has made progress in attaining its objectives.

Points of Time: T3, T4.

Item 1 As I see it, my organization has made progress in attaining its objectives.

	Fall, 1971 T3			Spring, 1972 T4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experimental LEA #1	32	6.125	0.941	31	5.903	0.789
Experimental LEA #2	31	5.483	1.091	32	5.375	1.070
Experimental LEA #3	24	5.750	0.793	23	5.478	0.947
Experimental LEA #4	29	5.241	0.950	27	4.814	1.210
Control LEA #1	30	5.733	0.944	20	5.600	0.753
Control LEA #2	36	5.305	1.116	33	5.303	1.074
Total	182			166		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1W/	Col.	0.894	NS
Experimental LEA#2	Row	11.182	.001
Experimental LEA#3W/	Col.	3.156	NS
Experimental LEA#4	Row	8.892	.01
Experimental LEA#1W/	Col.	1.129	NS
Control LEA #1	Row	4.324	.05
Experimental LEA#2W/	Col.	0.403	NS
Control LEA #1	Row	1.548	NS
Experimental LEA#3W/	Col.	0.512	NS
Control LEA #2	Row	2.614	NS
Experimental LEA#4W/	Col.	1.193	NS
Control LEA #2	Row	1.978	NS

Item #1: Fall 1971 to Spring 1972

This question was posed in Y2 only. Our purpose was to gain some perspective on how personnel in the LEA's felt about the progress they were making toward their goals.

Item #1, As I see it, my organization has made progress in attaining its objectives, recorded no significant effects that can be attributed to AMA training. State EL1 and EL2 significantly differed from each other, holding time constant; EL1 reached a higher level of progress than EL2, but no significant changes registered over time. EL1 was also significantly different from Control EL1, holding time constant.

EL3 and EL4 differed from each other. Holding time constant, EL3 ranked higher at both points in time, but both groups made no change over time.

In summary, no LEA experienced any significant change over time concerning its attitudes toward progress on objectives. All felt they were approximately at the same level of achievement in the Spring of 1972 as they had been in the Fall of 1971. An examination of mean scores indicates that all the LEA's actually experienced slight declines over this period of time, although these were never statistically significant.

DATA SUMMARY

Progress Toward
Goal Achievement

Fall, 1970 - Spring, 1972

	Type of Data	IMPACT OF TRAINING		
Item	QUESTIONNAIRE	Positive Effect	No Effect	Negative Effect
1	As I see it, my organization has made progress in attaining its objectives.		EL1, EL2, EL3, EL4	

DATA SUMMARY
End Result Variables - LEA
Fall, 1970 - Spring, 1972

Item	Type of Data	IMPACT OF TRAINING Positive Effect	No Effect	Negative Effect
	DEVELOPMENT OF A LONG-RANGE STRATEGIC PLAN			
	QUESTIONNAIRE			
1	My organization's overall plan is operable.	EL1,EL2	EL3,EL4	
	PROGRESS TOWARD GOAL ACHIEVEMENT			
	QUESTIONNAIRE			
1	As I see it, my organization has made progress in attaining its objectives.		EL1,EL2, EL3,EL4	

Analysis of the attitudinal data indicates that the AMA program had little impact on how LEA end-result variables were viewed.

Positive effects were recorded in regard to how operable EL1 and EL2 thought their organizational plans. The plans were considered more feasible in Spring 1972 than in Fall 1970, before the start of training.

But this opinion was not shared by EL3 and EL4, both of whom saw no change in their plans' practicality. None of the LEA's perceived increased progress toward objectives as a product of AMA training.

In fact, during the first two periods when progress might reasonably have been expected (T3 and T4), all four LEA's sensed less progress in T4 than in T3. This decline, while not statistically significant, did not augur well for future progress.

Section 5: Summary and Conclusions

It is easier to list what education invests in its programs than to measure what it achieves through them. Discovering whether planning guidelines exist or whether performance standards have been developed is a comparatively concrete problem. Even diagnosing the internal health of an organization can be achieved by a longitudinal research design with reliable instruments. But it is more difficult to decide whether these causal and intervening variables have improved the implementation of planning or hastened educational progress (end-result variables).

This analysis begins with two advantages, however. One is the audit of the quality of the plans produced, which was conducted using the best evaluative criteria available. The second is the expressed attitudes of persons inside these organizations: how operable are their plans and how much headway has been made in accomplishing them?

ANALYSIS OF ESED PRIORITY AREA PLANS

Spring, 1972

		ESED #1		ESED #2		
		Career Education	Reading	Early Childhood	Human Relations	Reading
	Criteria	ANALYSIS				
1	Title	Yes	Yes	Yes	Yes	Yes
2	Identification	No	No	No	No	Yes
3	Needs Assessment	Yes	Yes	Yes	Yes	No
4	Recommendations	No	Yes	Yes	Yes	Yes
5	Expected Results	Yes	Yes	Yes	Yes	Yes
6	Time Frames	Yes	Yes	Yes	Yes	Yes
7	Responsibility	No	No	No	No	Yes
8	Resource Requirements	No	No	No	No	Yes
9	Evaluation Strategies	No	Yes	No	No	No
10	Rationale	No	No	No	No	No
		Yes=4 No =6	Yes=6 No =4	Yes=5 No =5	Yes=5 No =5	Yes=7 No =3

ANALYSIS OF ELEA PLANS
Spring, 1972

		ELEA #1	ELEA #2	ELEA #4
	Criteria	ANALYSIS		
1	Title	Yes	Yes	Yes
2	Identification	No	No	No
3	Needs Assessment	No	No	No
4	Recommendations	Yes	Yes	Yes
5	Expected Results	Yes	Yes	No
6	Time Frames	Yes	Yes	No
7	Responsibility	No	No	No
8	Resource Requirements	No	Yes	No
9	Evaluation Strategy	No	No	No
10	Rationale	No	No	No
		Yes=4 No =6	Yes=5 No =5	Yes=2 No =8

ATTITUDINAL DATA SUMMARY

End Result Variables -
State Education Department

Fall, 1970 - Spring, 1972

Item	Type of Data	IMPACT OF TRAINING Positive Effect	No Effect	Negative Effect
	DEVELOPMENT OF A LONG-RANGE STRATEGIC PLAN			
	CONTENT			
1	Produce and implement a long-range strategic plan		E1	E2
	QUESTIONNAIRE			
2	My organization's overall plan is operable.		E1,E2	
	PROGRESS TOWARD GOAL ACHIEVEMENT			
	CONTENT			
1	Number of objectives toward which progress has been made		E1,E2	
2	Level of progress toward those objectives		E1,E2	
	QUESTIONNAIRE			
3	As I see it, my organization has made progress in attaining its objectives.		E1,E2	
		0	9	1

DATA SUMMARY

End Result Variables - Local
Education Agencies

Fall, 1970 — Spring, 1972

Item	Type of Data	IMPACT OF TRAINING		
		Positive Effect	No Effect	Negative Effect
	DEVELOPMENT OF A LONG-RANGE STRATEGIC PLAN			
	QUESTIONNAIRE			
1	My organization's overall plan is operable.	EL1,EL2	EL3,EL4	
	PROGRESS TOWARD GOAL ACHIEVEMENT			
	QUESTIONNAIRE			
1	As I see it, my organization has made progress in attaining its objectives.		EL1,EL2 EL3,EL4	
		2	6	0

This examination of the status of the Experimental State and Local Educational Agencies' end-result variables relates actions to attitudes separately described in the body of this chapter. It is necessary to establish this relationship because what people in organizations _do_ often depends on how they _feel_, and vice versa.

It can be argued, we think, that this reciprocal relation obtains here. The "mixed reviews" given the plans, and the general "no effect" rating attributed to AMA training as summarized on the preceding charts, are connected. One of the reasons why people in the SED's and LEA's felt AMA training had no effect on plan feasibility or progress was that they felt the plans were not feasible and they lacked measures of progress. Plans were not completely thought out; certain key elements called for by generally accepted planning criteria were absent. A partial, overgeneralized plan is not operable nor does it offer much hope of successful implementation.

The plans that were reviewed did contain the central planning elements: objectives (ends) and some strategies (means) for attaining these ends. The plans set forth highly professional statements of what the agency would accomplish as well as how and when they intended to accomplish it. Some attention was also given to who would benefit from the accomplishment.

Unfortunately, why received only passing attention. Lists of assumptions and beliefs do not satisfy the need to define precisely the problems a plan proposes to solve, nor does it suggest why these problems are selected for solution. Such rationalization is a necessary preliminary to decisions on secondary objectives and strategies dictated by the overall approach to the problem.

Recommendations logically follow from assessed needs.[16] Needs can exist without recommendations; indeed, in a system with many needs and few resources, they are nearly inevitable. A budget only stretches so far. But recommendations without stated needs make little sense. A problem whose existence is not acknowledged in detail cannot be solved--although planners have been known to try. Making recommendations without making clear the reasons behind them implies that needs are being assumed, not proved.

Clearly, writers of some plans we examined knew their needs, but this knowledge is not conveyed by the plans. By and large, the plans do not logically progress from assessed need to expected solution, with well-reasoned intermediate steps. This is less true of the state agency plans we reviewed, but even there the discussion of needs was often framed in prose with only modest empirical evidence. If plans do not carefully study needs, they tend to become statements of personal or agency conviction and shibboleth rather than carefully defined attacks on existing problems. Illustratively, we cited the example of one SED that intended to attain a future 85% reading achievement level without evidence as to present levels.

Secondly, the issues of who will do it and how much will it cost were not satisfactorily addressed. Responsibility for plan elements was indefinite in a few of the SED and LEA plans made available to the research team. It is certainly essential to designate in the plan who will coordinate efforts toward broad agency-wide objectives or individual classroom tasks. The responsibility of everyone frequently becomes the responsibility of no one. Assignments made to "staff" or "selected personnel" are not really assignments at all.

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[16] It should be noted here that state-wide Needs Assessments are presently being conducted by both Experimental SED's, which should do much to correct this "gap" in the planning documents.

The amount of money, personnel, and materials required to accomplish these objectives were also inadequately developed. A "wish list" is ordinarily a plan completely devoid of reality; some plans could be considered, at least in part, as wish lists. It is relatively easy to list objectives; it is not so simple to pay for them. "Budgets should support plans,"[17] and the finished planning document must contain full budgetary information, for the plan cannot be approved by those in authority nor evaluated in a financial vacuum.

Thirdly, plans did not propose viable evaluation mechanisms for measuring progress toward stated objectives. This is a widespread problem for education (as well as other fields) that is not peculiar to the SED's and LEA's. The measurement of student and administrative achievement lacks both adequate indices and methodology to generate reliable information.

Absence of adequate instruments may also help to explain the absence of needs assessments and problem definitions. Tools used to measure progress can also define problems; they keep interpretations consistent and analyses statistically reliable. But plans cannot offer data on current needs which they do not have and cannot obtain.

Expressed organizational attitudes are even more problematic. Generally, plans were not viewed as more operable a year after training than they had been before training. Progress had reached no higher level during this same time span. This indicated not what the AMA program had done to the Experimental educational agencies, but rather what it failed to do for them.

Plans were not seen as generally operable by the personnel in these agencies because, from the perspective of the criteria, they were indeed inoperable. As demonstrated earlier, planning documents were incomplete. Administrators face a formidable task in trying to follow a plan that does not specify the need it addresses, the money or men it will cost, task responsibility, or mode of evaluation.

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[17] An operational principle taken from A Plan for Planning Elementary and Secondary Education, SED #1, p. 9.

The lack of reported progress is associated with this lack of operability. The organizations did not develop adequate evaluation techniques to measure progress, yet progress that cannot be measured cannot be reported.

Overall Summary on the Impact of AMA Training on the SED/LEA Intervening and End-Result Variables

Our examination of the data on intermediate and end-result output variables indicates that the training program with the American Management Association exerted a mixed effect on the plans produced, and no effect on the degree to which people in the Experimental agencies saw themselves progressing toward their objectives.

The plans we examined represent good first or second drafts in an ongoing planning process that demands continuous revision to meet developing needs. Changes in the plans themselves can also reflect increasing proficiency in planning. The AMA did succeed in giving the Experimental agencies basic skills in some prerequisites of good planning, but not in others. Perhaps because of what AMA failed to do and what remains to be done, plans are not considered operable or moving toward goal accomplishment. If the "secondary" elements described above were added, perhaps the plans could be operationalized and progress generated.

Given specific needs, task assignments, cost figures, and evaluation techniques, plans still may not work. We only suggest that, without these details, plans cannot work.

CHAPTER SEVEN

OVERALL SUMMARY AND CONCLUSIONS

This chapter attempts to integrate the findings and analysis of previous chapters into a set of conclusions on the overall effectiveness of the AMA program.

It begins with a review of AMA change strategies and the theoretical connections that tie these strategies to ongoing organizational settings. We use an adaptation of Likert's causal/intervening/end-result variables framework to establish these connections.

Then we summarize data and interpretations from earlier chapters of this report in order to provide a background perspective for further analysis.

Finally, we integrate all our conclusions (previously separated by causal, intervening, and end result variable divisions) into a series of general conclusions regarding the impact of the AMA training program on the Experimental educational agencies.

To these ends, Chapter Seven includes the following sections:

1. American Management Association Strategies for Change
2. Summaries and Interpretations of Earlier Findings of this Report
3. Overall Conclusions on the Effectiveness of the AMA Program

Section 1: The American Management Association's Strategy for Change

Training Format

We defined the training format as the program components, their contents, the people to whom they were administered, and periods in which they were administered.[1]

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[1] See Chapter One of this report for a complete explanation of the training design of the AMA program. This material was adapted from the Y1 evaluation, Larry

The AMA training package unites three programs: the Management Course for Presidents (MCP), the Top Management Briefing (TMB) and the Educational Planning Process (EPP). The MCP was attended only by the State Superintendent, while the TMB was administered to the top twenty-four administrators (twelve in the case of Local Educational Agencies) from each State Education Department.[2]

The third program, the Educational Planning Process, reached "organizational families": participants included organizational superiors and subordinates who work together regularly. The first group of twelve top state agency administrators to attend the program were the State Superintendent and his immediate organizational subordinates. The second group was led by the person chiefly responsible for delivery of program services to the LEA's. Groups from the LEA's were composed of School Superintendents and eleven of their immediate subordinates.

Almost all participants in the EPP first attended the Top Management Briefing. Since the MCP was taken only by the State Superintendent, we will focus here on the TMB and EPP portions of the training program.

The Top Management Briefing and the Educational Planning Process

We believe that the impact of training is contingent upon the content conveyed as well as *how* it is conveyed. Here we review what has been explicated more fully earlier concerning these aspects of the AMA training program.

Controls exercised upon the input of the training importantly influenced the type of change that was likely to occur. Analysis of the MCP and the TMP indicates their considerable similarity of program design; thus we will discuss only the TMB here.

The matrix developed as a result of analyzing the TMB indicated that approximately 80% of the program's time was controlled by the AMA lecturer who was sharing concepts, experiences, and impressions with the trainees.

Kirkhart and W. Lynn Tanner, "Evaluation for Center for Planning and Development of the American Management Association." Report submitted to the American Management Association and the United States Office of Education, Syracuse University, October, 1971.

[2] Only the State Superintendent from ESED #2 attended the MCP.

Approximately 12.6% of training time was devoted to general discussion, while 7.4% went to small-group discussions. Input to the general discussions was controlled by both the leader, an AMA representative, and the trainees.

The AMA strategy relies heavily upon the quality of the information given to the client, and on the style of the lecturer's presentation.[3] This general process we have called an informational method of change. Techniques relying primarily upon information-giving are effective in ambiguous situations, where lack of information clearly prevents appropriate performance.[4] The Content of the TMB centered on what we have discussed earlier as AMA's view of management problems in Education, and on the solutions professional management techniques can provide to public agencies.[5]

The change strategy employed in the second major program, the Educational Planning Process, differed somewhat from that presented in the TMB. Unlike the TMB, whose input was almost entirely controlled by sources external to the trainee, the EPP design involved a mutuality of input control.

The boundaries of legitimate discourse within the EPP program were controlled by the AMA through several proscribed steps in the organizational planning process through which the trainees are guided. During this process, the AMA attempts to build a viable management team through the interaction that takes place. The AMA is convinced that, by dealing with problems that emerge in the EPP, managers will modify their behavior and begin to employ the techniques advocated by the AMA.[6]

While the AMA defined all aspects of their planning process, the input within these boundaries emerged from the client group and the particular problems of their organization. The trainer's role was to clarify the boundaries of legitimate discourse, keep the client group oriented to the problem of organizational planning, insure that each step in the planning process was accomplished as fully as possible, and attempt to maximize the extent to which interpersonal discourse remained a reasonable dialogue and exchange of opinion.

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[3] Cf. Chapter One and the Introduction to Part III of this report.

[4] Daniel Katz and Robert L. Kahn, The Social Psychology of Organizations (New York: John Wiley, 1966), p. 393.

[5] Cf. Introduction to Part III of this report.

[6] Ibid.

In analyzing the potential impact of the AMA training program the first year's research team employed a typology of attitude change composed of compliance, identification, and internalization.

Attitude change based on compliance involves doing or saying what one is expected to say when a particular situation is presented. Like change based on compliance, attitude change based on identification also requires an external stimulus before the proper attitude is acquired by the trainee. Identification normally occurs through exposure to a person whose social role behavior or mannerisms are attractive. The third type of change is precipitated by internalization; unlike the other two attitudinal changes, internalization incorporates certain values into the person's basic beliefs and does not depend upon external support for its activation.

Based on this typology, the Y1 research team concluded that the TMB--if it produced attitude change at all--would do so through compliance and identification on the part of the trainees.[7] They must identify and accept the concepts, experiences and values of the AMA lecturers.

The primary processes of attitudinal change involved in the EPP were also judged to be compliance and identification. Here, compliance was tied to the fact that the boundaries of discourse were defined by the AMA's conceptualization of effective organizational planning. Identification processes were triggered by the interaction of the members of the client group. Attitudes altered by this interaction can be expected to manifest themselves whenever the role relationships upon which the identification is based are present.

Internalized attitude change was not considered part of the direct intention of the training design by the Y1 research team.[8] Their conclusion was reached on the grounds that the AMA trainers did not deal with the process level of the group's behavior, and therefore internalized change could not occur. The emotional factors apparent in the interaction were not dealt with by the trainers, who intervened only to improve the quality of logical discourse and to insure the continued pre-programmed progress of the group through each step of the planning process. Since the possibility of internalization is optimized when both logical discourse and emotions are considered, the first year's research team concluded that internalization was unlikely to be a major initiator of attitude change from the AMA training program.

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[7] Kirkhart and Tanner, op. cit., p. 128.

[8] Ibid.

Linking Program with Organizational Impact

This evaluation (Y1 and Y2) rests on the assumption that attitudinal change is a necessary condition of changing organizational behavior, but not a necessary and sufficient condition. The AMA training program makes the basic assumption that trainees need new knowledge concerning management and planning techniques. Thus, in our view, for the program to be effective it must change attitudes of organizational members as well as their actions within their organizations.

As the Y1 evaluation concluded only a short time after the AMA program ended, the primary focus of Y1 analysis was measuring the impact of training on attitudes related to the original training goals of the AMA. As the planning documents had only recently been developed, it was considered inappropriate to evaluate them in Y1.

The analysis of data collected during the Y1 evaluation indicated that, in general, the AMA program did not affect the participants' attitudes toward the original AMA training goals.

The basic purpose of Y2 research has been to extend the time perspective of the evaluation in order, over time, to measure the impact of AMA training on organizational attitudes and actions. The basic question of Y2 is, then: "To what extent did the AMA program change the attitudes and actions of the people in the Experimental organizations?"

Our evaluation efforts involved the two State Education Departments and the four Local Educational Agencies originally trained. As control groups, we added two State Education Departments and two Local Educational Agencies.[9]

To link the AMA training program with potential organizational impact we have employed Likert's concept of causal, intervening, and end-result variables. We have defined the original training goals of the AMA as causal variables. Their accomplishment is viewed here as essential to the development of a viable planning process within the trained organizations. Our definition of the intervening variables is based on the AMA's process goals related to leadership style, decisionmaking, and management team relations. We have measured the extent to which the training program affected these elements that involve the intrinsic health of the organization.

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[9] See Chapter Two of this report for a complete discussion of the Research Methodology and Design employed in this evaluation.

In our development of the end-result variables we have defined the plans produced as intermediate output of the planning system. Final output is defined as actual, measured progress toward the specific objectives stated in the planning documents. We regard each variable as equally important; viable planning documents are essential to the achievement of end-results, while plans that do not bring improved goal attainment have little value.

Section 2: Summaries and Interpretations of Earlier Findings of this Report

This section reviews what has been reported in earlier chapters. These summaries are grouped within the same divisions followed in Chapters Four, Five, and Six: Causal Variables, Intervening Variables, and End-Result Variables.

The major charts presented in those three chapters are reiterated here, together with an edited version of our original conclusions from those charts as well as other information from each chapter. This will re-introduce the reader to our previous analysis so that he can better understand our summary conclusions.

A. The Causal Variables

> The "causal" variables are independent variables which determine the course of developments within an organization and the results achieved by the organization. These causal variables include only those independent variables which can be altered or changed by the organization and its management . . .
>
> \- Rensis Likert, *The Human Organization* (1967)

According to our interpretation, the causal variables of this program were the thirteen training goals enumerated by the AMA as appropriate criteria for evaluation. Each organization should have:

1) agreed upon a definition of the institution's mission;
2) established continuing objectives and planning procedures for long-range achievement of the institution's mission;
3) identified resources and constraints;
4) differentiated between where the institution is going and where it wants to go;
5) modified previously established objectives;
6) identified and analyzed alternative courses of action;
7) determined priorities;
8) made strategic action assignments;
9) defined standards of performance for key administrators;
10) specified task completion dates;
11) designed supplementary planning efforts;
12) assigned responsibilities to subordinate units;
13) designed a methodology by which future performance may be evaluated in relation to the performances specified in the plan.

Based on these criteria, the research team examined work at Hamilton and immediately thereafter in the state educational departments and local education agencies. We also asked persons within those organizations how they felt about the theory behind their training goals, as well as how goals had been put into practice. Our attitudinal inquiries were organized into several categories.

SED

1. Definition of the Mission of the Institution
2. Development of Organizational Objectives and Priorities
3. Mobilization of Organizational Planning
4. Role of the Planning Unit
5. Development of Evaluation Techniques
6. Top Management Support for Planning
7. The Credibility of the Planning Process

LEA

1. Development of Organizational Mission and Objectives
2. Mobilization of Organizational Mission and Objectives
3. Top Management Support for Planning
4. The Credibility of the Planning Process

This combination of actions and attitudes provided essential data for our assessment of the extent to which the AMA program affected the causal variables in each education agency. The following charts summarize our findings, followed by our interpretations of those charts and other data.

CAUSAL VARIABLES
STATE EDUCATIONAL AGENCY LEVEL

Summary of Findings
AMA Criteria 1-14
Fall 1970 to Spring 1972

CAUSAL VARIABLES
STATE EDUCATIONAL AGENCY LEVEL
Summary of Findings
AMA CRITERIA 1-14
Fall 1970 to Spring 1972

WRITTEN PLANNING DOCUMENTS		AMOUNT OF PROGRESS		
No.	Criteria	Minimum	Moderate	Maximum
1.	Agreed upon a definition of the institution's mission			E1,E2
2.	Established continuing objectives and planning procedures for long-range achievement of the institution's mission			E1,E2
3.	Identified resources and constraints		E1,E2	
4.	Differentiated between where the institution is going and where it wants to go		E1,E2	
5.	Modified previously established objectives		E1,E2	
6.	Identified and analyzed alternative courses of action		E1,E2	
7.	Determined priorities		E1	E2
8.	Made strategic action assignments	E1	E2	
9.	Defined standards of performance for key administrators	E1	E2	
10.	Specified task completion dates	E1	E2	
11.	Designed supplementary planning efforts			E1,E2
12.	Assigned responsibilities to subordinate units		E1,E2	
13.	Designed a methodology by which future performance may be evaluated in relation to the performances specified in the plan	E1,E2		
14.	Produced and are implementing a long-range strategic plan		E1,E2	
Total Number of Possible Effects: 28		5	16	7

ATTITUDINAL DATA SUMMARY

Causal Variables - State Education Agencies

Fall, 1970 - Spring, 1972

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
	DEFINITION OF THE MISSION OF THE ORGANIZATION			
	CONTENT DATA DRAWN FROM INTERVIEWS			
1	Definition of the Institution's Mission		E1	E2
2	Sense of SED Mission		E1,E2	
3	Feelings about the direction the organization is moving		E1,E2	
	QUESTIONNAIRE ITEMS			
4	The kinds of things I am doing will make a long-term contribution to education.		E1	E2
	DEVELOPMENT OF ORGANIZATIONAL OBJECTIVES & PRIORITIES			
	CONTENT DATA DRAWN FROM INTERVIEWS			
1	Modify previously established objectives		E1	E2
2	Identify and analyze alternative courses of action		E1,E2	
3	Determine priorities			E1,E2
4	Do you feel that the objectives developed as a result of AMA training reflect the most serious and pressing needs of state education?		E1,E2	
	QUESTIONNAIRE ITEMS			
5	The goals of this organization are articulated.		E1,E2	
6	Our goals are realistic and attainable with our best efforts.		E1,E2	
7	The top-priority objectives of state education are clear to me.		E1,E2	

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
8	I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.		E1,E2	
9	As I see it, the operational priorities of the objectives developed during AMA training are clear.		E1,E2	
	MOBILIZATION OF ORGANIZATIONAL PLANNING			
	CONTENT DATA DRAWN FROM INTERVIEWS			
1	Define standards of performance for key administrators		E1,E2	
2	Specify task completion dates and action assignments		E1,E2	
3	Assign responsibilities to subordinate units	E2	E1	
4	Need for Performance Standards		INSUFFICIENT DATA (T4 ONLY) ON WHICH TO BASE A RESPONSE	
5	Performance Standards--Extent of Use			
6	Existence of Performance Reviews			
	QUESTIONNAIRE ITEMS			
7	My organization's policy statements are clear.		E1,E2	
8	My organization's performance standards are understood.	E1,E2		
9	Good ways are used to let me know how I can improve my performance.		E1,E2	
10	I understand what results must be produced to achieve the stated objectives of this organization		E2	E1
	ROLE OF THE PLANNING UNIT			
	CONTENT DATA DRAWN FROM INTERVIEWS			
1	Awareness of need to evaluate our programs		E1,E2	
2	Available to answer planning questions		E1,E2	

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
3	Writing guidelines for plan development		E1	E2
4	Reviewing and refining plans		E1,E2	
5	Provides leadership in the implementation of planning		E1,E2	
6	Provides in-service training in planning		E1,E2	
	QUESTIONNAIRE ITEMS			
7	The planning unit has been helpful to me.		E1,E2	
	DEVELOPMENT OF EVALUATION TECHNIQUES			
	CONTENT DATA DRAWN FROM INTERVIEWS			
1	Designed a methodology by which future performance may be evaluated in relation to the performance specified in the plan			E1,E2
2	Informal Feedback		INSUFFICIENT	
3	Performance Reviews		DATA (T4 ONLY)	
4	Questionnaires		ON WHICH TO	
5	Task Completion Inventories		BASE A	
6	Unobtrusive Measures		RESPONSE	
	QUESTIONNAIRE ITEMS			
7	I have good ways for knowing how good our results are.	E2		E1
8	My organization has reliable ways for knowing how well it is attaining its objectives.		E1,E2	
9	I think that the objectives developed during AMA training are clearly stated with respect to results expected.		E1,E2	
	TOP MANAGEMENT SUPPORT FOR PLANNING			
	CONTENT DATA DRAWN FROM INTERVIEWS			
1	Adequate Resources (money and information)		E1,E2	
2	Control System expressed through decision making process		E1,E2	

Item	Type of Data	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
	QUESTIONNAIRE ITEMS			
3	My manager makes it clear he is committed to the success of our projects.	E1		E1
4	My manager has expressed the belief that the AMA's training program has been helpful.		E1,E2	
5	My manager understands planning theory and is able to put it into practice.		E1,E2	
6	I believe my organization gives me adequate training to do my work effectively.		E1,E2	
7	I feel good about my manager's ability to plan.		E1,E2	
8	My manager provides me with adequate support to perform my job.	E1		E2
	THE CREDIBILITY OF THE PLANNING PROCESS			
	CONTENT DATA DRAWN FROM INTERVIEWS			
1	Establish credibility of planning		E1	E2
2	Role of Planning: how integral	E1,E2		
3	Role of Planning: how much is needed		E1,E2	
4	Role of Planning: emergence	E1,E2		
	QUESTIONNAIRE ITEMS			
5	As I see it, planning is an integral part of running the state's schools.			E1,E2
6	As I see it, persons in this organization put a lot of effort into planning.			E1,E2
7	My capability to plan effectively will positively affect my future career in this organization.	E1,E2		
8	The activities relating to planning are having an effect on the policy of this organization.		E1	E2
	Total Number of Possible Effects: 84	12	54	18

CAUSAL VARIABLES
LOCAL EDUCATIONAL AGENCY LEVEL

Summary of Findings
AMA Criteria 1-14
Fall 1970 to Spring 1972

CAUSAL VARIABLES

LOCAL EDUCATIONAL AGENCY LEVEL

Summary of Findings
AMA CRITERIA 1-14
Fall 1970 to Spring 1972

WRITTEN PLANNING DOCUMENTS

		AMOUNT OF PROGRESS		
No.	Criteria	Minimum	Moderate	Maximum
1.	Agreed upon a definition of the institution's mission			EL1,EL2 EL3,EL4
2.	Established continuing objectives and planning procedures for long-range achievement of the institution's mission			EL1,EL2, EL3,EL4
3.	Identified resources and constraints		EL1,EL2, EL3,EL4	
4.	Differentiated between where the institution is going and where it wants to go	EL3	EL1,EL2, EL4	
5.	Modified previously established objectives		EL1,EL2, EL3,EL4	
6.	Identified and analyzed alternative courses of action	EL3	EL1,EL4	EL2
7.	Determined priorities	EL1,EL2, EL3,EL4		
8.	Made strategic action assignments	EL3	EL2,EL4	EL1
9.	Defined standards of performance for key administrators	EL1,EL2, EL3,EL4		
10.	Specified task completion dates		EL1,EL3	EL2,EL4
11.	Designed supplementary planning efforts	EL3	EL1,EL2, EL4	
12.	Assigned responsibilities to subordinate units		EL1,EL2, EL3,EL4	
13.	Designed a methodology by which future performance may be evaluated in relation to the performances specified in the plan	EL1,EL2, EL3,EL4		
14.	Produced and are implementing a long-range strategic plan		EL1,EL2, EL4	
	Total Number of Possible Effects:55	16	27	12

SUMMARY OF ATTITUDINAL FINDINGS
CAUSAL VARIABLES -
LOCAL EDUCATION AGENCY LEVEL
Fall 1970 — Spring 1972

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
	DEVELOPMENT OF ORGANIZATIONAL MISSION & OBJECTIVES			
	QUESTIONNAIRE ITEMS			
1	The goals of this organization are articulated.	EL1	EL2, EL3, EL4	
2	Our goals are realistic and attainable with our best efforts.	EL1, EL2	EL3, EL4	
3	The top priority objectives for state education are clear to me.		EL1, EL2, EL3, EL4	
4	I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.		EL1, EL2, EL3, EL4	
5	As I see it, the organizational priorities of the objectives developed during AMA training are clear.		EL1, EL2, EL3, EL4	
6	The kinds of things I am doing will make a long-term contribution to education.		EL1, EL2, EL3, EL4	
7	As I see it, my organization is moving in the right direction.		EL1, EL2, EL3, EL4	
	MOBILIZATION OF ORGANIZATIONAL PLANNING			
	QUESTIONNAIRE ITEMS			
1	My organization's policy statements are clear.		EL1, EL2, EL3, EL4	
2	My organization's performance standards are clear.		EL1	EL2, EL3, EL4
3	Good ways are used to let me know how I can improve my performance.	EL1, EL2	EL3, EL4	

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
4	I understand what results must be produced to achieve the stated objectives of this organization.		EL1,EL2, EL3,EL4	
5	The planning unit has been helpful to me.		EL1,EL2, EL3,EL4	
6	I have good ways for knowing how good our results are.		EL1,EL2, EL3,EL4	
7	My organization has reliable ways for knowing how well it is achieving its objectives.		EL1,EL2, EL3,EL4	
8	I think that the objectives developed during AMA training are clearly stated with regard to results expected.		EL1,EL2, EL3,EL4	
	TOP MANAGEMENT SUPPORT FOR PLANNING QUESTIONNAIRE ITEMS			
1	My manager makes it clear he is committed to the success of our projects.		EL1,EL2, EL3,EL4	
2	My manager has expressed the belief that the AMA's training program has been helpful.	EL3,EL4	EL1,EL2	
3	My manager understands planning theory and is able to put it into practice.		EL1,EL2	EL3,EL4
4	I believe my organization gives me adequate training to do my work effectively.		EL1,EL2, EL3,EL4	
5	I feel good about my manager's ability to plan.		EL1,EL2, EL3,EL4	
6	My manager provides me with adequate support to perform my job.		EL1,EL2, EL3,EL4	
	CREDIBILITY OF THE PLANNING PROCESS QUESTIONNAIRE ITEMS			
1	As I see it, planning is an integral part of running the state's schools.		EL1,EL2, EL3,EL4	
2	As I see it, persons in this organization put a lot of effort into planning.		EL1,EL2, EL3	EL4

Item	Type of Data	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
3	My capability to plan effectively will positively affect my future career in this organization.		EL1,EL2, EL3,EL4	
4	The activities relating to planning are having an effect on the policy of this organization		EL1,EL2, EL3,EL4	
Total Number of Possible Effects:100		7	87	6

Interpretation

An analysis of actual results on the first thirteen criteria indicates that, with few exceptions, the SED's and LEA's had made moderate progress on all of them. The research team believed that most of the action taken on most of the criteria demonstrated that the organizations had done more than just mention the criterion (minimum progress); but they had not actually fully developed it (maximum progress). NMA training definitely helped the educational agencies to devote considerable time and energy to planning and to produce a wide range of planning documents. At least on paper, the germs of a satisfactory planning process were present.

However, a survey of attitudinal findings related to these planned actions reveals that, to a large extent, the planning documents *had not* changed how people *felt* about organizational planning. A pattern of *no effects* emerged when we compared attitudes expressed *before* training with attitudes expressed after training and after the actions had been taken.

Training had not altered participants' impressions of their ongoing planning process. By and large, the Experimental agencies thought they were doing *about the same quantity and quality of planning before training began and after training ended.* While some effects might have been observed immediately after training, many disappeared within a year. The NMA program did very little to change permanently, for example, attitudes on the sense of organizational mission, objectives, performance standards, and job descriptions.

As a result, if the organization had considered itself effective by the standards of certain training goals before training, they had not changed their opinions after training. On the other hand, if an organization had thought little of its planning operations prior to AMA training, the program did not substantially improve these opinions.

Thus, in terms of how persons in the SED's and LEA's felt about their planning process, a strong process remained strong and a weak process remained weak. Despite the spate of planning documents produced as a consequence of AMA training, opinions about the planning process in the organization itself remain unchanged.

This raises the significant issue of how viable, in fact, these documents were. If they were usable action papers, we would assume that the plans would have affected the attitudes of those who developed and worked with them. That the plans had virtually no effect suggests that much of what was done during and after training was seen as meaningless paper production, unrelated to the actual process by which plans were, or were not, developed inside the agencies.

B. The Intervening Variables

> The "intervening" variables reflect the internal state and health of the organization, e.g., the loyalties, attitudes, motivations, performance goals, and perceptions of all members and their collective capacity for effective interaction, communication, and decision making.
>
> \- Rensis Likert, The Human Organization (1967)

The AMA has specific goals concerning these intervening variables that are crucial to an evaluation. These variables are the essential ingredients of the organizational environment that can make or mar the team planning process.

This process depends on the development of strong leadership to guide the organization; decentralization of decisionmaking so that planning decisions can be made, as much as possible, by those nearest the level at which the decision will be implemented; and the creation of teams of managers who cooperate with each other to achieve jointly the educational objectives specified in the plan.

Without a suitable internal environment, even complete development and internalization of the thirteen

AMA training goals (causal variables) cannot be translated into viable organizational plans and actual progress. To use an agricultural analogy, intervening variables constitute the ground in which the seeds of the causal variables are planted, and from which will hopefully grow mature plans and progress toward plan objectives.

To evaluate these variables, we developed three categories. Each contained interview and questionnaire items, analysis of which gave the research team a comprehensive view of the effectiveness of the training program in that category. The several categories, taken together, were the basis of overall conclusions as to training's effect upon the internal workings of the organizations. These categories were:

A. Leadership Climate

B. Decisionmaking

C. Management Team Relations

Data summary charts presenting the results of our interviews and questionnaires are reprinted from Chapter Five below. Following the charts is an edited version of our original interpretation of the data.

INTERVENING VARIABLES
STATE EDUCATIONAL AGENCY LEVEL

Summary of Findings
Fall 1970 to Spring 1972

ATTITUDINAL DATA SUMMARY

Intervening Variables - State
Educational Agency Level

Fall 1970 - Spring 1972

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
	LEADERSHIP CLIMATE			
	QUESTIONNAIRE ITEMS			
1	Based on information I have received from my boss, I know if I am measuring up in my job.	E1		E2
2	My manager encourages and supports innovation.	E1		E2
3	Higher management's reactions to the problems which reach them are fair.	E2	E1	
4	My manager knows and understands the problems I face.	E1		E2
5	My manager recognizes when a problem is developing and does something constructive about it.	E1		E2
6	My manager shows confidence and trust in me.	E1		E2
	DECISIONMAKING			
	CONTENT DATA DRAWN FROM INTERVIEWS			
1	Involvement in Decisionmaking in the State Department		E1,E2	
2	Quality of Decisionmaking in the State Department	E1,E2		
3	Influence of Planning on decisionmaking provess		E1,E2	
	QUESTIONNAIRE ITEMS			
4	The people I work with participate appropriately in setting the goals of our work.	E1		E2

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
5	I am appropriately involved in decisions affecting my work.	E1,E2		
6	I can influence the goals, methods, and activities of my organization.		E1,E2	
	MANAGEMENT TEAM RELATIONS			
	CONTENT DATA DRAWN FROM INTERVIEWS			
1	Promote cooperative teamwork		E1	E2
2	Amount of cooperative teamwork	E1	E2	
	QUESTIONNAIRE ITEMS			
3	My work group works hard to achieve its goals.	E1,E2		
4	My work group understands what we are trying to achieve.		E1	E2
5	I feel my group works well together.	E2	E1	
6	I really feel my immediate work group is getting things done.	E1		E2
7	When differences arise in my work group, we have good ways for settling them ourselves.	E2	E1	
Total Number of Possible Effects: 38		17	12	9

INTERVENING VARIABLES
LOCAL EDUCATIONAL AGENCY LEVEL

Summary of Findings

Fall 1970 to Spring 1972

ATTITUDINAL DATA SUMMARY

Intervening Variables - Local Educational Agency Level

Fall 1970 - Spring 1972

Item	Type of Data	IMPACT OF TRAINING		
		Positive Effect	No Effect	Negative Effect
	LEADERSHIP CLIMATE			
	QUESTIONNAIRE ITEMS			
1	Based on information I have received from my boss, I know if I am measuring up in my job.		EL1,EL2 EL3,EL4	
2	My manager encourages and supports innovation.		EL1,EL2, EL3,EL4	
3	Higher management's reactions to the problems which reach them are fair.		EL1,EL2, EL3,EL4	
4	My manager knows and understands the problems I face.		EL1,EL2, EL3,EL4	
5	My manager recognizes when a problem is developing and does something constructive about it.		EL1 EL2	EL3 EL4
6	My manager shows confidence and trust in me.		EL1,EL2, EL3,EL4	
	DECISIONMAKING			
	QUESTIONNAIRE ITEMS			
1	The people I work with participate appropriately in setting the goals of our work.		EL1,EL2, EL3,EL4	
2	I am appropriately involved in decisions affecting my work.		EL1,EL2, EL3,EL4	
3	I can influence the goals, methods, and activities of my organization.		EL1,EL2, EL3,EL4	
	MANAGEMENT TEAM RELATIONS			
	QUESTIONNAIRE ITEMS			
1	My work group works hard to achieve its goals.		EL1,EL2, EL3,EL4	
2	My work group understands what we are trying to achieve.		EL1,EL2, EL3,EL4	

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
3	I feel my group works well together.		EL1, EL2, EL3, EL4	
4	I really feel my immediate work group is getting things done.		EL1, EL2, EL3, EL4	
5	When differences arise in my work group we have good ways for settling them ourselves.		EL1, EL2, EL3, EL4	
Total Number of Possible Effects: 56		0	54	2

Interpretation

The SED's and LEA's exhibited different training effects. Among the SED's, the quality of E1's intervening variables were often *improved* by training, while in E2 the same variables were frequently *damaged* by participation in the AMA program. The LEA's assumed a middle position both in reference to the two Experimental States and on the data summary chart; *no effects* of training were the rule, not the exception, in these organizations.

These changes did not occur across-the-board, but reflected the general trend of the data for each agency. Not all items for E1 revealed positive effects; nor did every indicator for E2 show negative effects.

What do these results mean for the planning process? As sufficient but not necessary conditions for effective planning, the intervening variables are crucial to the AMA program. A healthy internal environment does not guarantee effective planning, but effective planning cannot genuinely occur without it. Fertile ground does not always yield good crops, but good crops cannot grow in infertile soil.

The data shows that State Educational Agency E1's internal environment, to a certain extent, was more favorable to team planning after training than they had been before; E2's was less favorable. The LEAs' environment was *unchanged*. Because of the intervening variables' potential contribution to organizational planning, we surmise that E1's chances for developing a viable planning process were enhanced; E2's were diminished; and the LEA's were uneffected by the AMA program.

Our judgment is that AMA's objective of improving the leadership climate, decisionmaking process, and management team relations of these six educational agencies had a 16% success rate.

Because of the positive effects that were measured, the training had its intended impact, on many items, in E1. Yet the program was largely unsuccessful in promoting favorable internal variables in the other Experimental State or in the LEA's. The AMA failed in E2 because of negative training effects and in the four school districts which registered no effects at all.

C. The End-Result Variables

> The end-result variables are the dependent variables which reflect the achievements of the organization. . .
>
> - Rensis Likert, The Human Organization (1967)

Analysis of the end-result variables answered the question, "What happened as a result of the AMA program?"[10] The causal and intervening variables laid groundwork for the development of ongoing divisional plans and actual progress toward educational objectives therein. Completion of the thirteen AMA training goals and the development of a favorable internal environment were essential for genuine planning and goal attainment.

As was necessary in our consideration of previous variables, actions and attitudes become the twin centers of attention when end-results are assessed. Even if plans and progress are being made, if individuals believe that their plans remain undeveloped and their progress is nonexistent, the process will collapse from lack of support. If organization members believe that plans are inoperable and progress impossible, chances are that they are right. Actions and attitudes more often agree than disagree, even if we do not consider the social-psychological reality of the self-fulfilling prophecy.

Our examination of end-result variables took two forms, the first an analysis of SED priority area plans and LEA general plans. In both cases, widely accepted criteria of what constitutes an operational plan were used. Secondly, we asked organization members what they thought about their plans and progress. From these sources, we drew our interpretations and conclusions.

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[10] Raymond E. Klawuhn and Alexander J. Basso, "Final Report: Adapting and Testing Business Management Development Programs for Educational Administrators" (mimeo), Jan. 1972, p. 29.

END RESULT VARIABLES
STATE EDUCATIONAL AGENCY LEVEL

Summary of Findings
Fall 1970 to Spring 1972

ANALYSIS OF STATE EDUCATIONAL AGENCY PRIORITY AREA PLANS

End Result Variables

Spring 1972

		ESED #1		ESED #2		
		Career Education	Reading	Early Childhood	Human Relations	Reading
CRITERIA		ANALYSIS				
1.	Title	Yes	Yes	Yes	Yes	Yes
2.	Identification	No	No	No	No	Yes
3.	Needs Assessment	Yes	Yes	Yes	Yes	No
4.	Recommendations	No	Yes	Yes	Yes	Yes
5.	Expected Results	Yes	Yes	Yes	Yes	Yes
6.	Time Frames	Yes	Yes	Yes	Yes	Yes
7.	Responsibility	No	No	No	No	Yes
8.	Resource Requirements	No	No	No	No	Yes
9.	Evaluation Strategies	No	Yes	No	No	No
10.	Rationale	No	No	No	No	No
		Yes=4 No =6	Yes=6 No =4	Yes=5 No =5	Yes=5 No =5	Yes=7 No =3

ATTITUDINAL DATA SUMMARY

End Result Variables
STATE EDUCATIONAL AGENCIES

Fall 1970 - Spring 1972

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
	DEVELOPMENT OF A LONG RANGE STRATEGIC PLAN			
	CONTENT DATA DRAWN FROM INTERVIEWS			
1	Produce and implement a long-range strategic plan		E1	E2
	QUESTIONNAIRE ITEMS			
2	My organization's overall plan is operable.		E1,E2	
	PROGRESS TOWARD GOAL ACHIEVEMENT			
	CONTENT DATA DRAWN FROM INTERVIEWS			
1	Number of objectives toward which progress has been made		E1,E2	
2	Level of Progress toward those objectives		E1,E2	
	QUESTIONNAIRE ITEMS			
3	As I see it, my organization has made progress in attaining its objectives.		E1,E2	
Total Number of Possible Effects:10		0	9	1

END RESULT VARIABLES
LOCAL EDUCATIONAL AGENCY LEVEL

Summary of Findings
Fall 1970 to Spring 1972

ANALYSIS OF LOCAL EDUCATIONAL AGENCY PLANS

End Result Variables

Spring 1972

CRITERIA	ELEA#1	ELEA#2	ELEA#3
	ANALYSIS		
1. Title	Yes	Yes	Yes
2. Identification	No	No	No
3. Needs Assessment	No	No	No
4. Recommendations	Yes	Yes	Yes
5. Expected Results	Yes	Yes	No
6. Time Frames	Yes	Yes	No
7. Responsibility	No	No	No
8. Resource Requirements	No	Yes	No
9. Evaluation Strategy	No	No	No
10. Rationale	No	No	No
	Yes=4 No =6	Yes=5 No =5	Yes=2 No =8

ATTITUDINAL DATA SUMMARY

End Result Variables

LOCAL EDUCATIONAL AGENCY LEVEL

Fall 1970 - Spring 1972

Item	Type of Data	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
	DEVELOPMENT OF A LONG RANGE STRATEGIC PLAN			
	QUESTIONNAIRE ITEMS			
1	My organization's overall plan is operable.	EL1,EL2	EL3 EL4	
	PROGRESS TOWARD GOAL ACHIEVEMENT			
	QUESTIONNAIRE ITEMS			
1	As I see it, my organization has made progress in attaining its objectives.		EL1,EL2 EL3,EL4	
	Total Number of Possible Effects:8	2	6	0

Interpretation

We found plans and progress not completely acceptable. Concerning the plans, we determined that their objectives and strategies were well developed and contained practical guidelines to assess their attainment (percentage achievement levels, client groups, and deadline dates). However, several required elements for an operational plan were often missing.

Systematic analyses of the needs that underlay action objective or strategy were not integral parts of the plans seen by the research team. Nor were the personnel and money required to reach an objective outlined in relation to that objective. Responsibility for reaching specific objectives or strategies was frequently left obscure. While the plans concisely stated where the agencies wished to go, they contained few evaluation methods to tell how fast the organizations were moving or whether they had arrived.

This was reflected in the attitudes of members of the SED's and LEA's. One of the reasons given by the AMA for applying business management development programs to education was that:

> Realistic, measurable objectives appear to be nonexistent in many educational agencies, and when defined they are frequently vague, not explicit, and unmeasurable.[11]

If this was the situation prior to AMA training, then, according to program participants, not much has changed as a result of training. No significant changes were recorded in views of the operability of agency plans or in aggregate awareness of progress toward objectives.

SED's and LEA's that considered their plans effective and their progress steady before training did not substantially change their views over time. Conversely, if plans were thought unrealistic or unmeasurable before AMA training, they were seen the same way after training. One of the reasons why opinions did not improve (and in some cases they declined), was because some plans were indeed unrealistic and unmeasurable. The absence of needs statements, cost estimates, responsibility assignments, and evaluative methods made them less than realistic. The AMA put an army of objectives into the field without the elementary logistics to make them work.

This is not to dismiss the progress made in all agencies in establishing effective, efficient planning systems. Many of the plans reviewed during this phase of the evaluation were tightly reasoned, logical statements of educational purpose. Their terminology, though it was lifted directly from AMA, phrased administrative and curricular goals more practically than the rhetoric used in most other educational institutions we have studied. Moreover, even if training was able directly to accomplish little else, it did raise peoples' consciousness of the existence of planning.

Section 3: Overall Conclusions on the Effectiveness of the AMA Program

Preliminary Considerations

Using the evidence and analysis presented in every previous chapter, we turn to answer the critical question of this evaluation: Was the AMA program worthwhile? Did the experimental educational agencies derive sufficient benefit from AMA training to justify the time and money it cost?

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[11] *Ibid.*, p. 4.

The answer to this basic, general question rests on answers to subsidiary questions: Did AMA training positively affect the actions and attitudes of the participating educational agencies toward management and planning concepts and skills? A second, parallel concern develops: Even if actions and attitudes of persons within the organizations were improved by training, did these changes enhance organizational output? Did the LEA's and SED's produce viable plans and move toward their stated educational objectives?

Basic Conclusions

Two years, a considerable investment, and the cooperation of many sponsoring and participating agencies, have been devoted to these issues. Now the data are in and the conclusions have been drawn. What are our overall conclusions?

Concerning actions and attitudes, we note that all agencies have evidently committed themselves to some degree of planning and have produced planning documents relating to the original thirteen AMA training goals. Despite this written work, however, attitudes about planning and its effectiveness showed no change after training. In terms of the causal and intervening variables, we thus demonstrated that training has had no significant effects on individual views of organization plans or internal environments.

Given the negative response to this first question, the second question on actual output becomes predictably academic. Since the AMA program did not substantially change participant perceptions of plans or work environments, we cannot anticipate any shift in how much the organizations were able to accomplish. Theoretically, output should have remained relatively stable; analysis revealed that it did so. To be sure, plans were developed to establish department priorities and school district programs. But these plans failed to meet all qualitative criteria of viable plans: they required further elaboration and some revision. In addition, the SED's and LEA's themselves did not believe that their plans had grown more operable or that they had progressed toward objectives. In view of the incompleteness of many plans, as well as the current lack of reliable methods of evaluating organizational progress, these comparatively static attitudes are unstartling.

At the conclusion of our study, the AMA program had not significantly altered attitudes toward planning, nor had it enabled the SED's and LEA's to produce complete, acceptable plans or to make measurable progress toward realizing them.

Therefore, the research team concludes that the AMA program exerted no significant effect on the actions, attitudes, or output of the Experimental educational agencies. Since virtually no significant changes in the agencies appeared, the research team believes that the Experimental agencies did not benefit from AMA training to a degree that justifies the time and money expended on the program.

Recommendations

In our judgment, the AMA planning process and training design demand considerable revision. If the program were further developed in a number of aspects enumerated below (and introduced earlier in this report), its impact upon educational agencies might be strengthened. Whether the consequent improvement would warrant continuation of this program or others similar to it, is a decision for the reader. Our suggestions are directed toward two aspects of the present AMA program: the planning process and the basic training design itself.

Issues Related to the Planning Process

Planning must be seen as a flexible process designed to meet the specific needs of a given organization. Insistence on writing objectives only in terms of student behavior, for example, may overlook critical process goals, which in turn reduces the plan's effectiveness.

The underlying assumptions and implications of planning for the particular organizations being trained should be thoroughly developed. Trainees must clearly comprehend the value and meaning of planning if they are to accept and use it.[12]

The issue of who writes the objectives, and for what ends, must be faced squarely. Plans cannot effectively be imposed on people in modern, complex organizations. As discussed in this report, experts inside the organization who are skilled in the administrative or educational specialties covered by plans have a critical input to contribute, and they should have every opportunity to do so.[13]

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[12] Cf. Chris Argyris, Intervention Theory and Method (Reading, Mass.: Addison-Wesley, 1971).

[13] Warren Bennis, Changing Organizations (New York: McGraw-Hill, 1965).

In programs designed to increase planning competence, the importance of developing an unambiguous understanding of planning concepts cannot be overestimated. The critical relationship of budgeting to evaluation and planning should also be emphasized, for plans that rest on little base-line data and carry no price tags only weaken the credibility of planning.

Issues Related to Training Design

The pre-training diagnosis of organizational needs and problems must be improved. Specific needs vary greatly among organizations; applying "cookbook" solutions to all organizations as if they were identical is a common error of training designs such as the one evaluated here. A clear prior understanding of an organization's unique needs would enable a training program to be tailored to the needs of the client group.[14]

Management team development, too, is a complex process.[15] Specific team development goals should be framed, in order to improve the group's performance. This may require approaches very different from those taken by strictly cognitive training. Both the process and cognitive elements of a training sequence must receive attention if genuine, lasting organizational change is desired.

A basic question of design is the applicability of Likert's linking-pin model of organization to education. The question of how public educational organizations actually function must be addressed within the planning process.[16] The imposition of a model that may not fit education can prove extremely wasteful. This issue is relevant to the special relationships between State Education Departments and Local Educational Agencies that were discussed earlier in this report: to assume in the planning process that SED's control LEA's, when in fact they do not, is to render the planning process weak at the root.

A second issue concerns the applicability of Likert's model to the current individual role definitions that exist in educational agencies. If one is to decide whether it is desirable to apply such a model to education, this issue and its underlying assumptions about roles in organizations must be thoughtfully analyzed.

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[14] Argyris, op. cit.

[15] Richard Beckhard, Organization Development (Reading, Mass.: Addison-Wesley, 1970).

[16] Ibid.

These suggestions for further development are not put forward as an indictment of the agencies, which worked remarkably well with what they had been given. Most of the ideas in the AMA program are feasible and essential, even though their implementation strategy is open to serious criticism.

This report is intended to encourage the continuing evolution of the planning process by providing reliable information and valid feedback on what has gone before, in order to improve what will come later. For, as has been noted by another writer, "The purpose of evaluation is not to prove but to improve."[17]

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[17] Daniel L. Stufflebeam et al., Educational Evaluation and Decision Making (Bloomington, Indiana: Phi Delta Kappa, Inc., 1971).

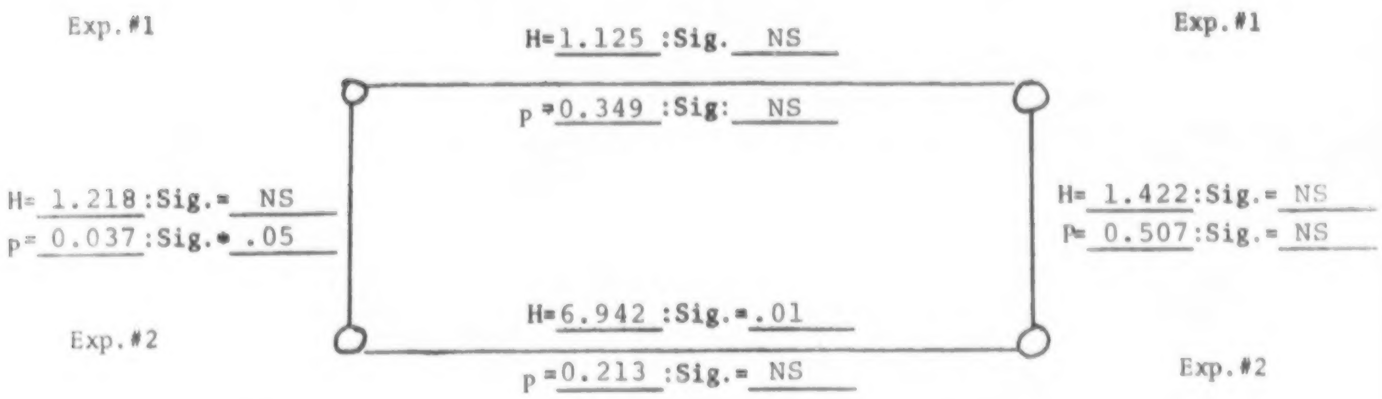
APPENDIX A

SCHEMATIC PRESENTATION OF DATA - CAUSAL VARIABLES, CHAPTER FOUR

CONTENT ANALYSIS DATA

Item 1 : Definition of the Institution's Mission

SCHEMATIC PRESENTATION OF ANALYSIS

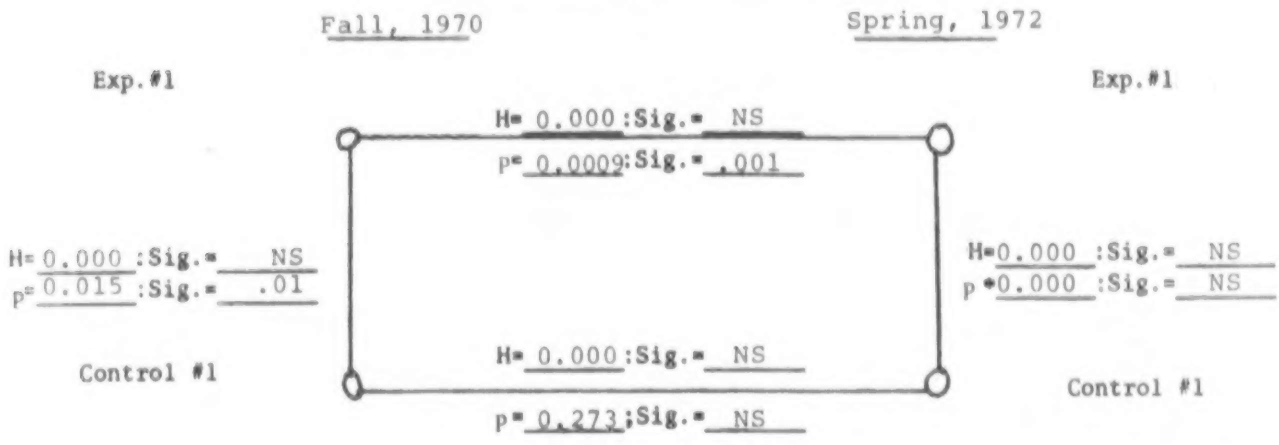

Fall, 1970
Spring, 1972
Exp. #1
H=1.125 :Sig. NS
Exp. #1
p =0.349 :Sig: NS
H= 1.218 :Sig.= NS
p= 0.037 :Sig.= .05
H= 1.422 :Sig.= NS
P= 0.507 :Sig.= NS
H=6.942 :Sig.= .01
Exp. #2
p =0.213 :Sig.= NS
Exp. #2

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	4 8	H= 1.218 Sig.= NS	P = 6.037 Sig. .05
Spring, 1972			
Experiment #1 & Experiment #2	3 5	H= 1.422 Sig.= NS	p = 0.507 Sig.= NS
Fall, 1970- Spring, 1972			
Experiment #1 & Experiment #1	4 3	H= 1.25 Sig.= NS	p = 0.349 Sig.= NS
Experiment #2 & xperiment #2	8 5	H= 6.942 Sig.= .01	p = 0.213 Sig.= NS

CONTENT ANALYSIS DATA

Item 2 : Sense of SED Mission

SCHEMATIC PRESENTATION OF ANALYSIS


Fall, 1970

Spring, 1972

Exp.#1

Exp.#1

H= 0.000 :Sig.= NS

p= 0.0009:Sig.= .001

H= 0.000 :Sig.= NS

p= 0.015 :Sig.= .01

H=0.000 :Sig.= NS

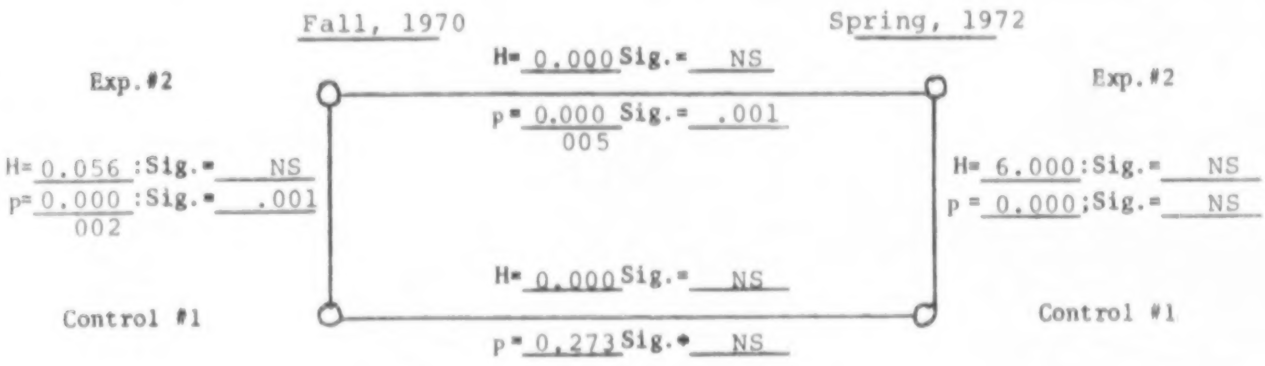
p =0.000 :Sig.= NS

Control #1

H= 0.000 :Sig.= NS

Control #1

p= 0.273;Sig.= NS


Fall, 1970

Spring, 1972

H= 0.000 Sig.= NS

Exp.#2

Exp.#2

p = 0.000 Sig.= .001
005

H= 0.056 :Sig.= NS

p= 0.000 :Sig.= .001
002

H= 6.000 :Sig.= NS

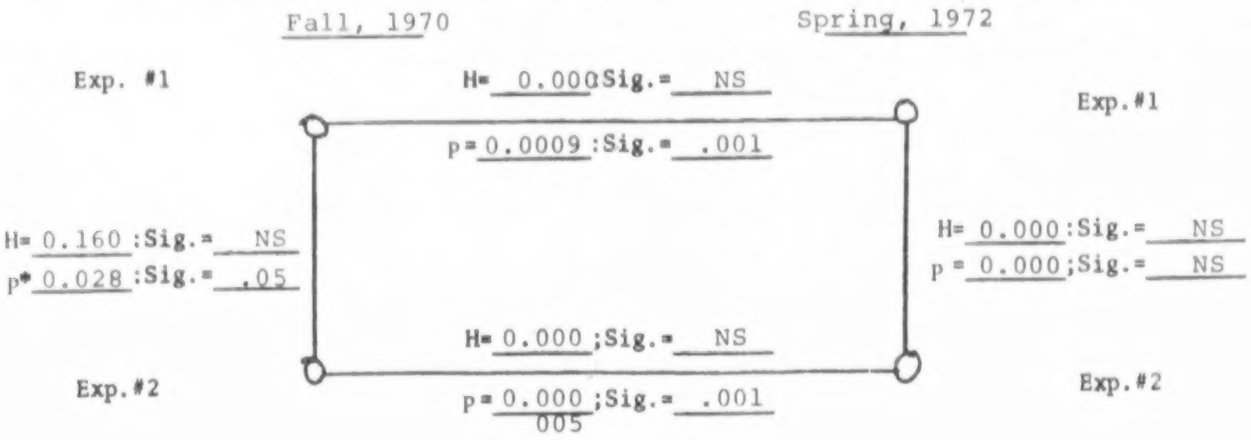
p = 0.000;Sig.= NS

H= 0.000 Sig.= NS

Control #1

Control #1

p = 0.273 Sig.= NS


Fall, 1970

Spring, 1972

Exp. #1

H= 0.000 Sig.= NS

Exp.#1

p = 0.0009 :Sig.= .001

H= 0.160 :Sig.= NS

p= 0.028 :Sig.= .05

H= 0.000 :Sig.= NS

p = 0.000;Sig.= NS

H= 0.000 ;Sig.= NS

Exp.#2

Exp.#2

p = 0.000 ;Sig.= .001
005

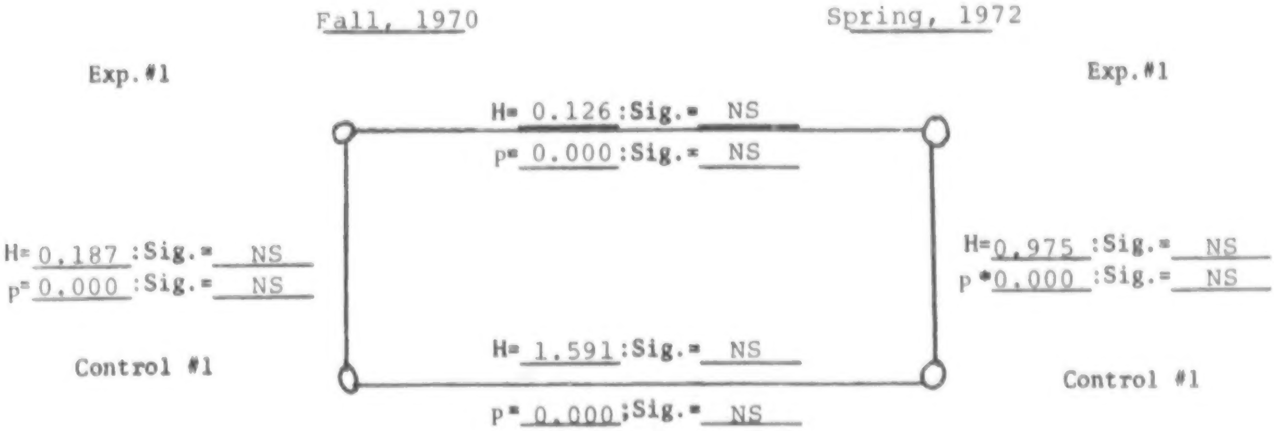
Item 2 : Sense of SED Mission

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binominal Test of Proportions
Experiment#1 & Control #1	5 2	H= 0.000 Signif.= NS	P = 0.015 Signif.= .01
Experiment#2 & Control #1	9 2	H= 0.056 Signif.= NS	p = 0.000002 Signif.= .001
Experiment#1 & Experiment#2	5 9	H= 0.160 Signif.= NS	P= 0.028 Signif.= .05
Spring, 1972			
Experiment#1 & Control #1	1 2	H= 0.000 Signif.= NS	P = 0.000 Signif.= NS
Experiment#2 & Control #1	2 2	H= 0.000 Signif.= NS	P = 0.000 Signif.= NS
Experiment#1 & Experiment#2	1 2	H= 0.000 Signif.= NS	P= 0.000 Signif.= NS
Fall, 1970 to Spring, 1972			
Experiment #1 & Experiment #1	5 1	H= 0.000 Signif.= NS	p= 0.0009 Signif.= .001
Experiment #2 & Experiment #2	9 2	H= 0.000 Signif.= NS	p= 0.000005 Signif= .001
Control#1 & Control#1	2 2	H= 0.000 Signif.= NS	P = 0.273 Signif.= NS

CONTENT ANALYSIS DATA

Item 3 : How do you feel about the direction your organization is moving?

SCHEMATIC PRESENTATION OF ANALYSIS



Fall, 1970
Spring, 1972

Exp. #1
Exp. #1

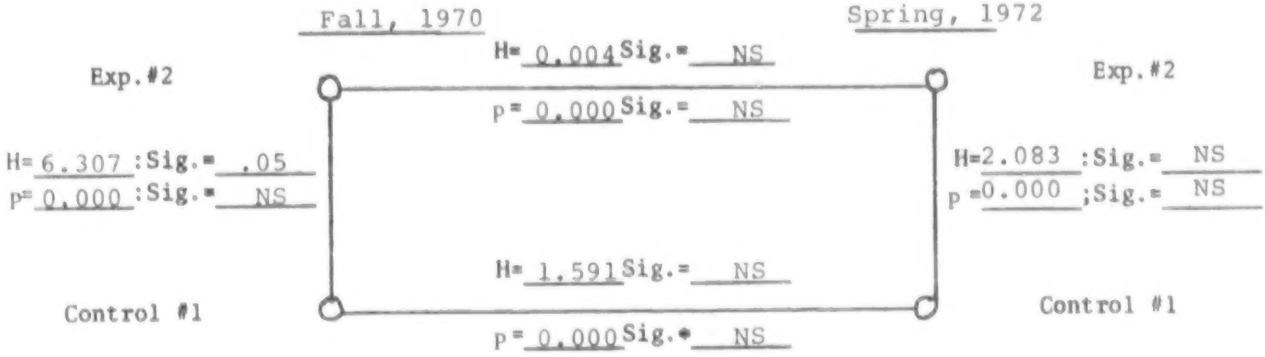
H= 0.126 :Sig.= NS
p= 0.000 :Sig.= NS

H= 0.187 :Sig.= NS
p= 0.000 :Sig.= NS

H= 0.975 :Sig.= NS
p = 0.000 :Sig.= NS

H= 1.591 :Sig.= NS
p = 0.000 ;Sig.= NS

Control #1
Control #1



Fall, 1970
Spring, 1972

Exp. #2
Exp. #2

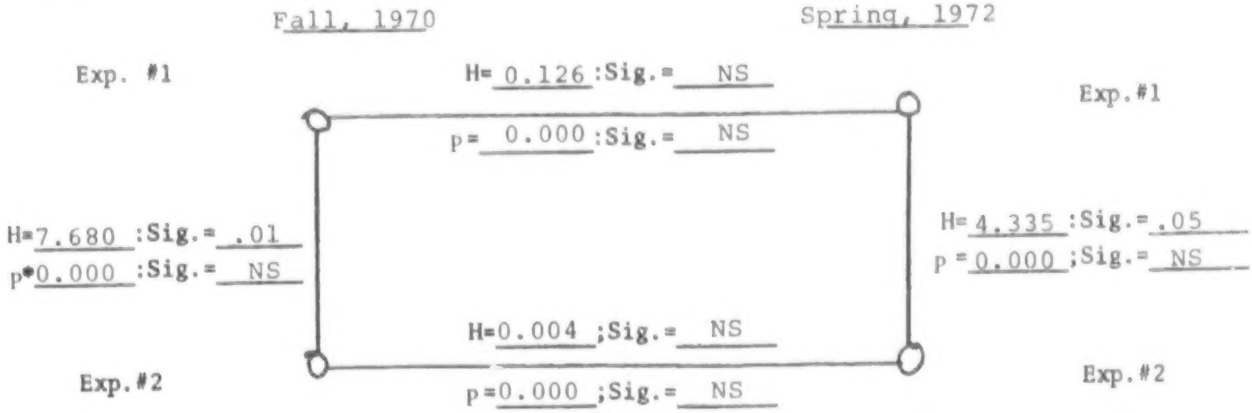
H= 0.004 Sig.= NS
p = 0.000 Sig.= NS

H= 6.307 :Sig.= .05
p= 0.000 :Sig.= NS

H=2.083 :Sig.= NS
p =0.000 ;Sig.= NS

H= 1.591 Sig.= NS
p = 0.000 Sig.= NS

Control #1
Control #1



Fall, 1970
Spring, 1972

Exp. #1
Exp. #1

H= 0.126 :Sig.= NS
p= 0.000 :Sig.= NS

H=7.680 :Sig.= .01
p=0.000 :Sig.= NS

H= 4.335 :Sig.= .05
p = 0.000 ;Sig.= NS

H=0.004 ;Sig.= NS
p =0.000 ;Sig.= NS

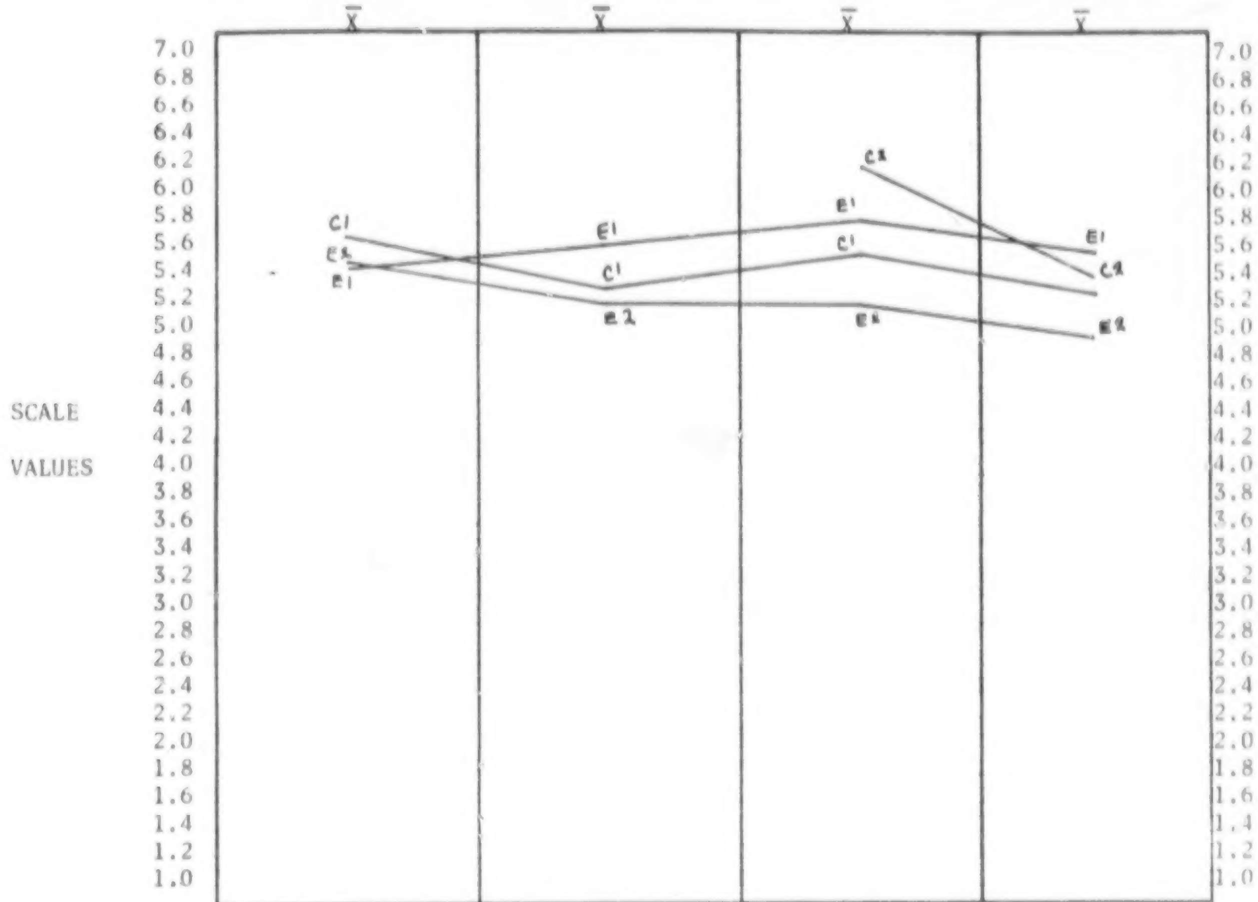
Exp. #2
Exp. #2

Item 3 : How do you feel about the direction your organization is moving?

Fall, 1970	N	**Kruskal-Wallis One-Way Analysis of Variance**	**Binominal Test of Proportions**
Experiment#1 & **Control #1**	12 12	**H=** 0.187 **Signif.=** NS	P = 0.000 **Signif.=** NS
Experiment#2 & Control #1	12 12	**H=** 6.307 **Signif.=** .05	p = 0.000 **Signif.=** NS
Experiment#1 & **Experiment#2**	12 12	**H=** 7.680 **Signif.=** .01	P= 0.000 **Signif.=** NS
Spring, 1972			
Experiment#1 & **Control #1**	9 11	**H=** 0.975 **Signif.=** NS	P =0.000 **Signif.=**NS
Experiment#2 & Control #1	10 11	**H=** 2.083 **Signif.=** NS	P =0.000 **Signif.=**NS
Experiment#1 & **Experiment#2**	9 10	**H=** 4.335 **Signif.=** .05	P=0.000 **Signif.=**NS
Fall, 1970 to Spring, 1972			
Experiment #1 & **Experiment #1**	12 9	**H=** 0.126 **Signif.=** NS	p=0.000 **Signif.=** NS
Experiment #2 & **Experiment #2**	12 10	**H=** 0.004 **Signif.=** NS	p= 0.000 **Signif=** NS
Control#1 & **Control#1**	12 11	**H=** 1.591 **Signif.=** NS	P = 0.000 **Signif.=** NS

QUESTIONNAIRE DATA

Item 4 The kinds of things I am doing will make a long-term contribution to education.



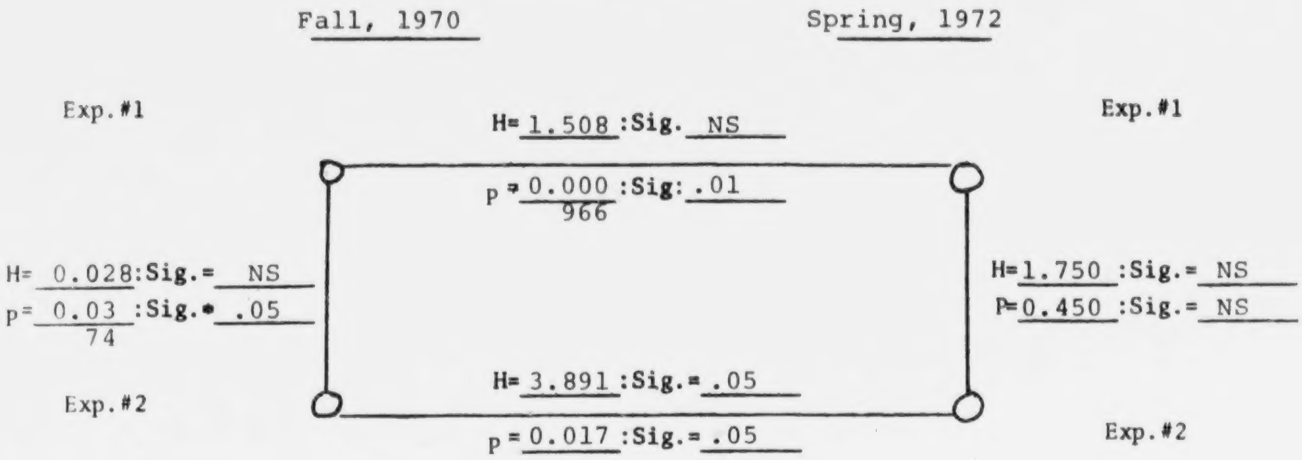
	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	5.436	1.553	73	5.630	1.339	68	5.838	1.311	40	5.600	1.057
Experimental SED #2	60	5.467	1.214	51	5.196	1.233	45	5.200	1.439	40	4.975	1.423
Control SED #1	66	5.697	1.301	61	5.393	1.159	67	5.507	1.106	61	5.278	1.253
Control SED #2							61	5.622	1.097	66	5.439	1.151
Total	165			185			241			207		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/	Col.	0.005	NS	0.959	NS	2.134	NS	0.560	NS
Control SED #1	Row	0.096	NS	3.232	NS	4.160	.05	0.060	NS
Experiment SED#2 W/	Col.	1.785	NS	0.074	NS	1.587	NS	6.694	.01
Control SED #1	Row	3.217	NS	2.642	NS	2.879	NS	2.288	NS
Experiment SED#1 W/	Col.					1.817	NS		
Control SED #2	Row					1.443	NS		
Experiment SED#2 W/	Col.					1.340	NS		
Control SED #2	Row					6.324	.02		

CONTENT ANALYSIS DATA

Item 5 : Modify previously established objectives.

SCHEMATIC PRESENTATION OF ANALYSIS



H= 1.508 :Sig. NS
p = 0.000966 :Sig: .01

H= 0.028:Sig.= NS
p= 0.0374 :Sig.= .05

H=1.750 :Sig.= NS
P=0.450 :Sig.= NS

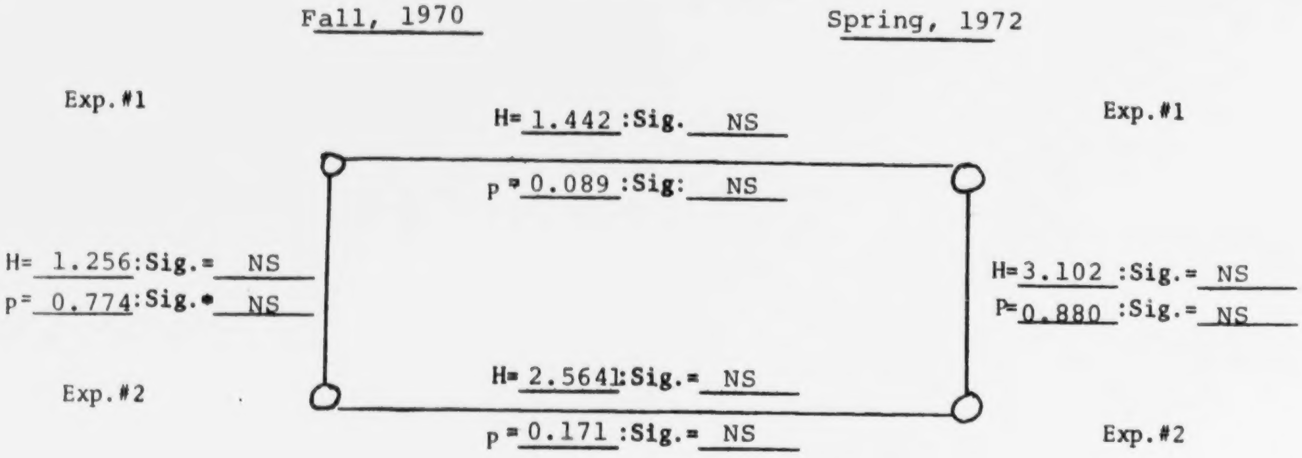
H= 3.891 :Sig.= .05
p = 0.017 :Sig.= .05

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1	4	H= 0.028	P = 0.0374
&			
Experiment #2	8	Sig.= NS	Sig. .05
Spring, 1972			
Experiment #1	7	H= 1.750	p =0.450
&			
Experiment #2	9	Sig.= NS	Sig.= NS
Fall, 1970 – Spring, 1972			
Experiment #1	4	H= 1.508	p = 0.000966
&			
Experiment #1	7	Sig.= NS	Sig.= .01
Experiment #2	8	H= 3.891	p = 0.017
&			
xperiment #2	9	Sig.=.05	Sig.= .05

CONTENT ANALYSIS DATA

Item 2 : Identify and analyze alternative courses of action.

SCHEMATIC PRESENTATION OF ANALYSIS

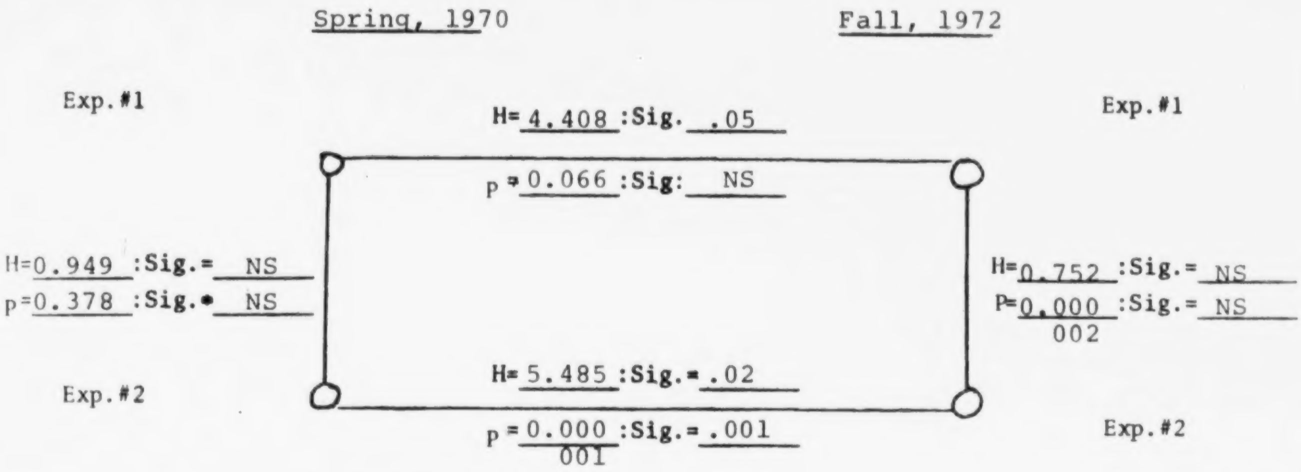

Fall, 1970
Spring, 1972
Exp.#1
H= 1.442 :Sig. NS
p = 0.089 :Sig: NS
Exp.#1
H= 1.256:Sig.= NS
p= 0.774:Sig.= NS
H=3.102 :Sig.= NS
P=0.880 :Sig.= NS
Exp.#2
H= 2.5641:Sig.= NS
p = 0.171 :Sig.= NS
Exp.#2

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 &	6	H= 1.256	P = 0.774
Experiment #2	6	Sig.= NS	Sig. NS
Spring, 1972			
Experiment #1 &	6	H= 3.102	p = 0.880
Experiment #2	6	Sig.=NS	Sig.= NS
Fall, 1970-Spring, 1972			
Experiment #1 &	6	H= 1.442	p = 0.089
Experiment #1	6	Sig.= NS	Sig.= NS
Experiment #2 &	6	H= 2.5641	p = 0.171
xperiment #2	6	Sig.= NS	Sig.= NS

CONTENT ANALYSIS DATA

Item 3 : Determine priorities.

SCHEMATIC PRESENTATION OF ANALYSIS

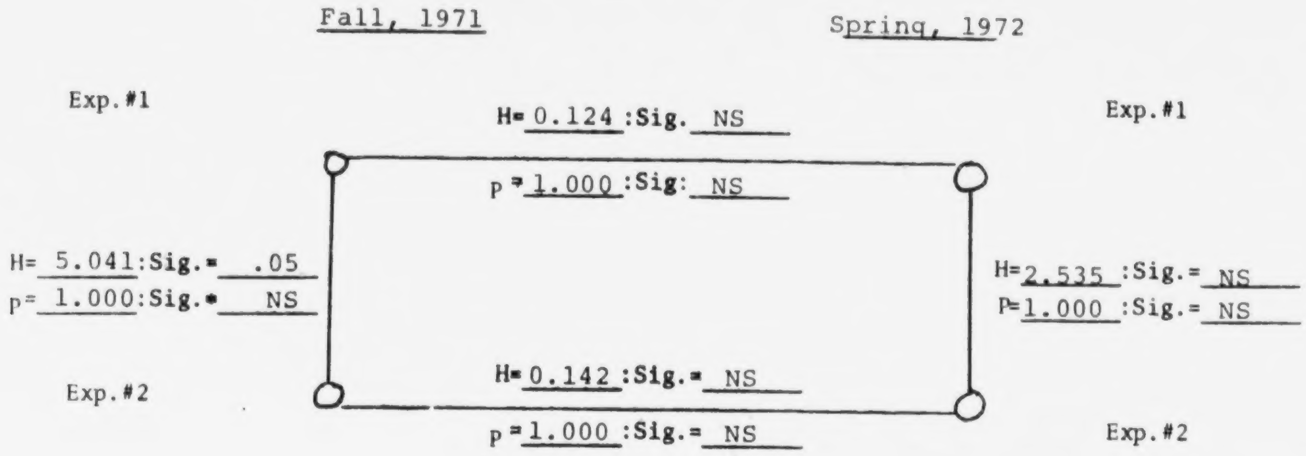

Spring, 1970
Fall, 1972
Exp.#1
Exp.#1
H= 4.408 :Sig. .05
p = 0.066 :Sig: NS
H=0.949 :Sig.= NS
p=0.378 :Sig.• NS
H=0.752 :Sig.= NS
P=0.000 002 :Sig.= NS
H= 5.485 :Sig.= .02
p = 0.000 001 :Sig.= .001
Exp.#2
Exp.#2

Spring, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1	5	H= 0.949	P • 0.378
&			
Experiment #2	7	Sig.= NS	Sig. NS
Fall, 1972			
Experiment #1	6	H= 0.752	P = 0.000 002
&			
Experiment #2	10	Sig.= NS	Sig.= .001
Spring, 1970-Fall, 1972			
Experiment #1	5	H= 4.408	p = 0.066
&			
Experiment #1	6	Sig.=.05	Sig.= NS
Experiment #2	7	H= 5.485	p = 0.000001
&			
xperiment #2	10	Sig.=.02	Sig.=.001

CONTENT ANALYSIS DATA

Item 4 : Do you feel that the objectives developed as a result of AMA training reflect the most serious and pressing needs of state education?

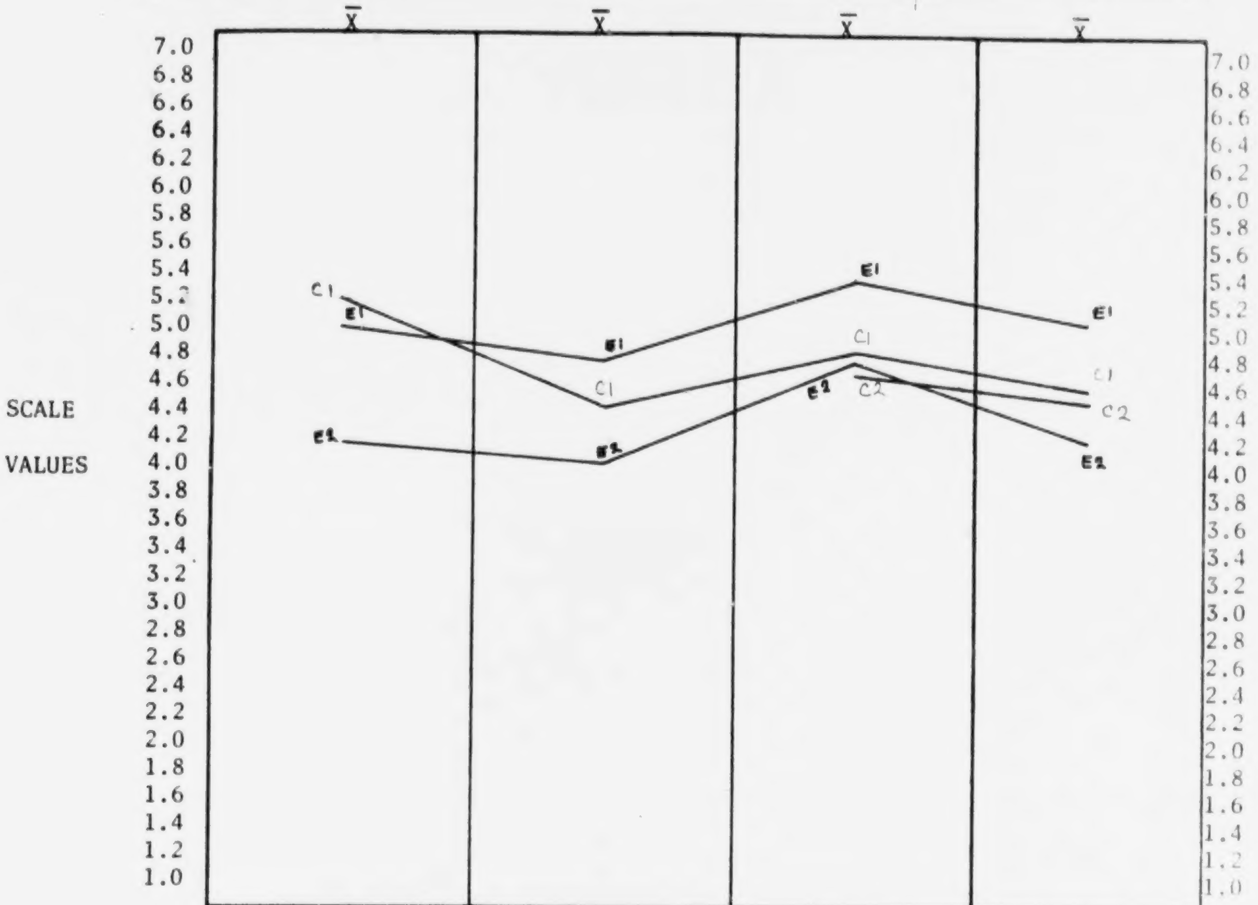
SCHEMATIC PRESENTATION OF ANALYSIS


Fall, 1971
Spring, 1972
Exp.#1
H= 0.124 :Sig. NS
Exp.#1
p = 1.000 :Sig: NS
H= 5.041:Sig.= .05
p= 1.000:Sig.= NS
H=2.535 :Sig.= NS
P=1.000 :Sig.= NS
Exp.#2
H= 0.142 :Sig.= NS
p = 1.000 :Sig.= NS
Exp.#2

Fall, 1971	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	9 10	H= 5.041 Sig.= .05	P = 1.000 Sig. NS
Spring, 1972			
Experiment #1 & Experiment #2	9 10	H= 2.535 Sig.= NS	P = 1.000 Sig.= NS
Fall, 1971- Spring, 1972			
Experiment #1 & Experiment #1	9 9	H= 0.124 Sig.= NS	p = 1.000 Sig.= NS
Experiment #2 & xperiment #2	10 10	H= 0.142 Sig.= NS	p = 1.000 Sig.= NS

QUESTIONNAIRE DATA

Item 5 The goals of this organization are articulated.

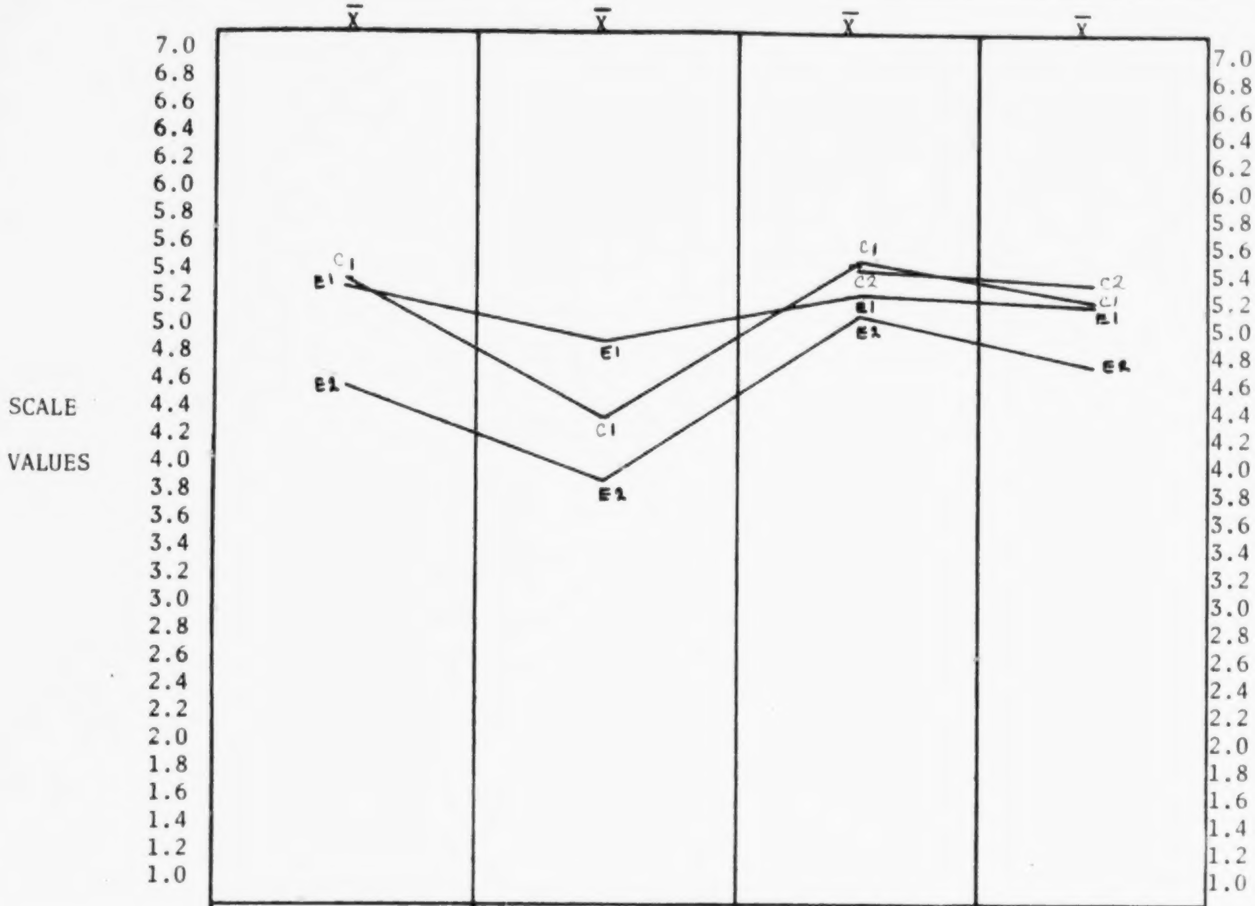


	Fall, 1970			Spring, 1971			Fall, 1971			Spring, 1972		
	T1			T2			T3			T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	5.077	1.133	73	4.808	1.497	68	5.411	1.318	40	5.175	1.278
Experimental SED #2	59	4.203	1.648	52	4.096	1.376	45	4.822	1.402	39	4.256	1.463
Control SED #1	65	5.231	1.222	61	4.496	1.501	67	4.895	1.232	59	4.610	1.450
Control SED #2							61	4.737	1.662	66	4.545	1.337
Total	163			186			241			204		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	0.197	NS	8.802	.01	2.175	NS	1.782	NS
	Row	7.578	.01	6.368	.05	9.328	.01	1.400	NS
Experiment SED#2 W/ Control SED #1	Col.	14.319	.001	9.421	.01	4.795	.05	1.856	NS
	Row	5.063	.05	1.705	NS	1.207	NS	11.665	.001
Experiment SED#1 W/ Control SED #2	Col.					1.290	NS		
	Row					11.914	.001		
Experiment SED#2 W/ Control SED #2	Col.					3.327	NS		
	Row					0.242	NS		

QUESTIONNAIRE DATA

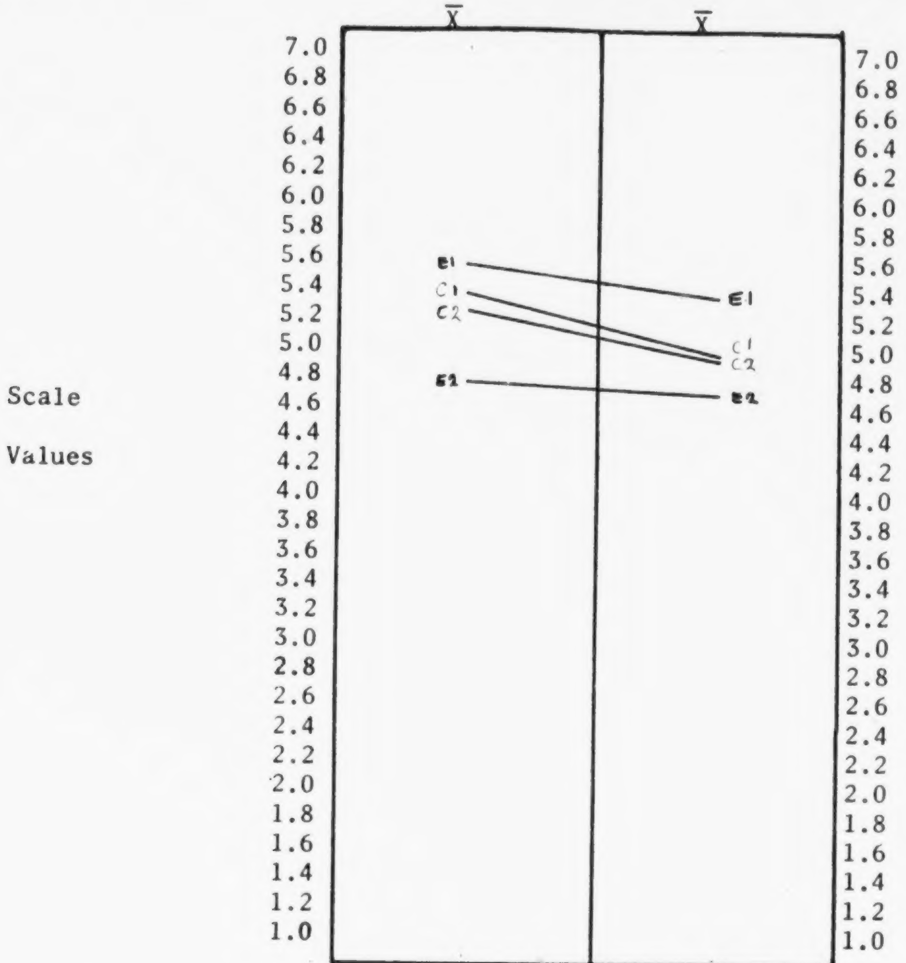
Item 6 Our goals are realistic and attainable with our best efforts.



	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	38	5.342	1.047	73	4.945	1.332	68	5.264	1.482	40	5.200	1.042
Experimental SED #2	59	4.610	1.630	51	4.392	1.297	45	5.133	1.217	40	4.750	1.334
Control SED #1	66	5.379	1.092	61	4.902	1.589	67	5.507	1.064	61	5.213	1.156
Control SED #2							61	5.459	1.489	66	5.333	1.167
Total	163			185			241			207		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	0.000	NS	8.262	.01	1.221	NS	0.808	NS
	Row	6.288	.05	0.186	NS	0.620	NS	0.006	NS
Experiment SED#2 W/ Control SED #1	Col.	11.964	.001	15.491	.001	4.218	.05	0.002	NS
	Row	3.539	NS	5.681	.05	6.439	.05	11.457	.001
Experiment SED#1 W/ Control SED #2	Col.					0.285	NS		
	Row					0.845	NS		
Experiment SED#2 W/ Control SED #2	Col.					1.919	NS		
	Row					6.120	.05		

Item 7 The top priority objectives of state education are clear to me.

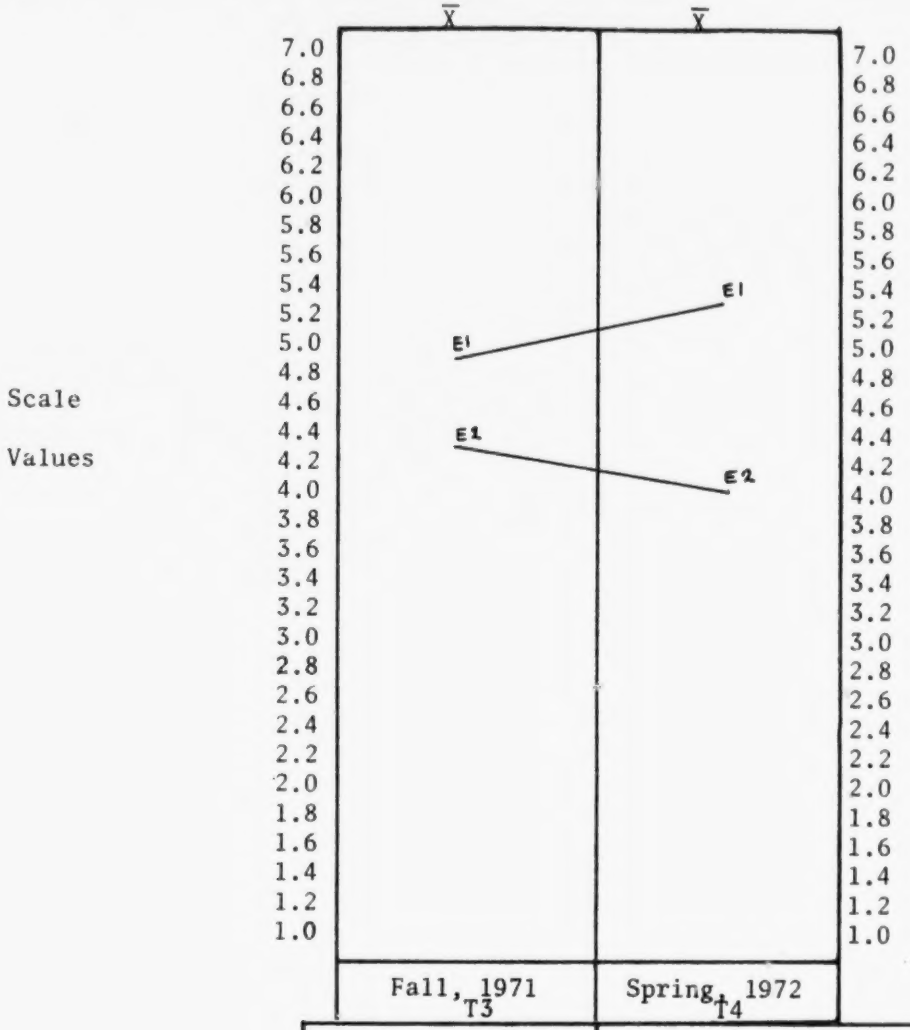


	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.617	1.425	40	5.400	1.296
Experimental SED#2	45	4.800	1.575	40	4.725	1.552
Control SED#1	67	5.417	1.195	61	5.016	1.431
Control SED#2	61	5.295	1.406	66	4.969	1.380
Total	241			207		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1 W/Control SED#1	Col.	2.989	NS
	Row	2.652	NS
Experiment SED#2 W/Control SED#1	Col.	1.437	NS
	Row	5.232	.05
Experiment SED#1 W/Control SED#2	Col.	2.151	NS
	Row	4.136	.05
Experiment SED#2 W/Control SED#2	Col.	0.949	NS
	Row	3.241	NS

QUESTIONNAIRE DATA

Item 8 I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.

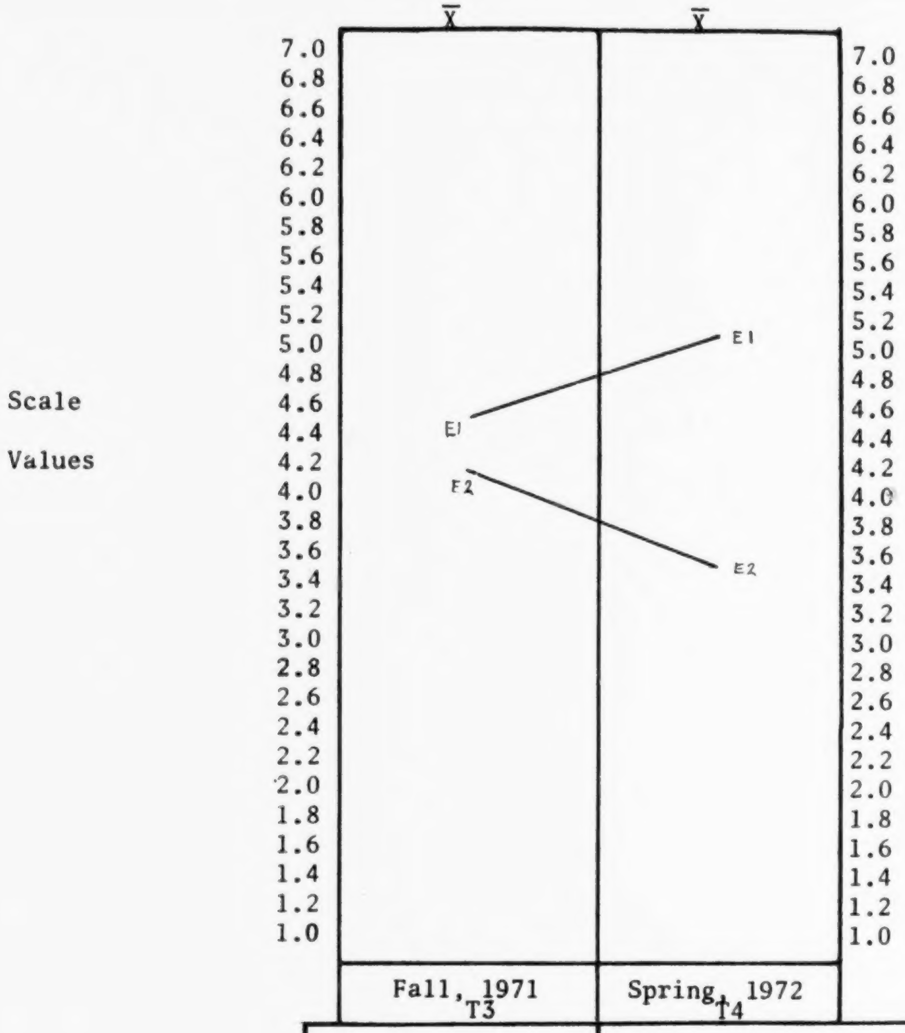


	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	4.926	1.887	39	5.333	1.131
Experimental SED#2	45	4.333	1.381	39	4.178	1.555
Total	113			78		

Two Way Analysis of Variance		T_3 & T_4	
		F	Signif.
Experimental SED#1	Col.	0.024	NS
W/Experimental SED#2	Row	16.981	.001

QUESTIONNAIRE DATA

Item 9 As I see it, the operational priorities of the objectives developed during AMA training are clear.



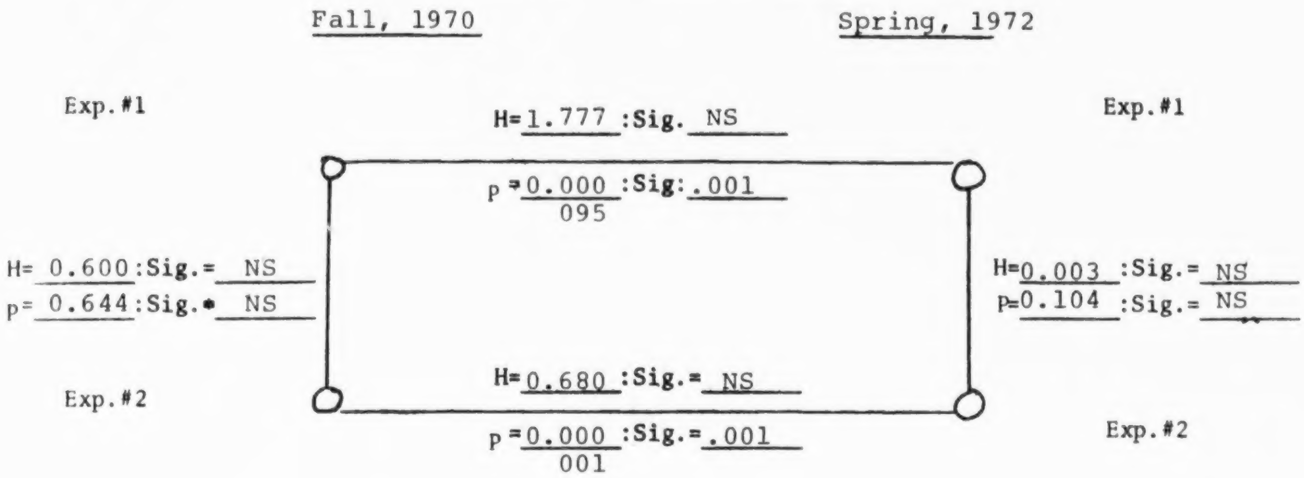
	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	4.558	1.887	37	5.108	1.264
Experimental SED#2	45	4.200	1.501	39	3.589	1.516
Total	113			76		

Two Way Analysis of Variance		T_3 & T_4	
		F	Signif.
Experimental SED#1	Col.	0.015	NS
W/Experimental SED#2	Row	15.065	.001

CONTENT ANALYSIS DATA

Item 1 : Define standards of performance for key administrators.

SCHEMATIC PRESENTATION OF ANALYSIS


Fall, 1970
Spring, 1972
Exp.#1
H=1.777 :Sig. NS
Exp.#1
p =0.000 095 :Sig: .001
H= 0.600:Sig.= NS
p= 0.644:Sig.= NS
H=0.003 :Sig.= NS
p=0.104 :Sig.= NS
H=0.680 :Sig.= NS
Exp.#2
p =0.000 001 :Sig.= .001
Exp.#2

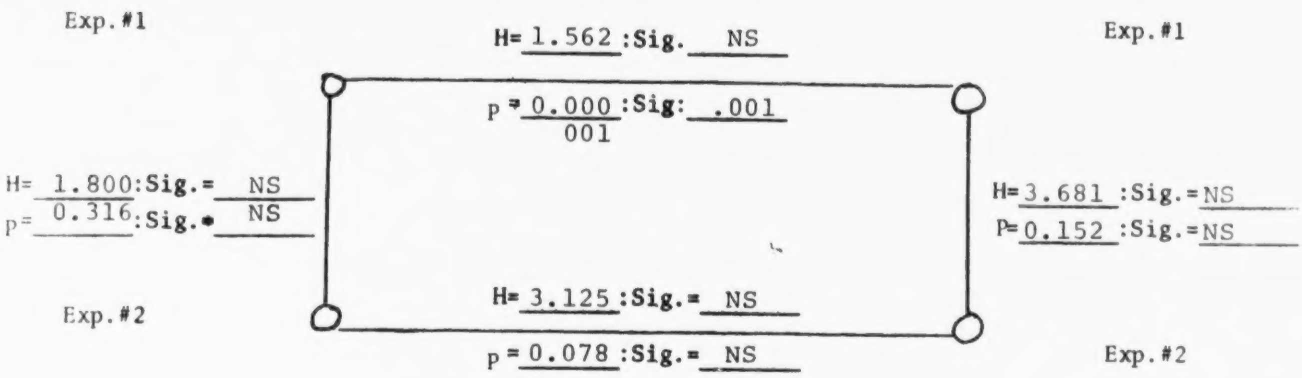
Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	2 2	H= 0.600 Sig.= NS	P = 0.644 Sig. NS
Spring, 1972			
Experiment #1 & Experiment #2	6 9	H= 0.003 Sig.= NS	p = 0.104 Sig.= NS
Fall, 1970-Spring, 1972			
Experiment #1 & Experiment #1	2 6	H= 1.777 Sig.= NS	p = 0.000095 Sig.= .001
Experiment #2 & xperiment #2	2 9	H= 0.680 Sig.= NS	p = 0.000001 Sig.= .001

CONTENT ANALYSIS DATA

Item 2 : Specify task completion dates and action assignments.

SCHEMATIC PRESENTATION OF ANALYSIS

Fall, 1970 Spring, 1972

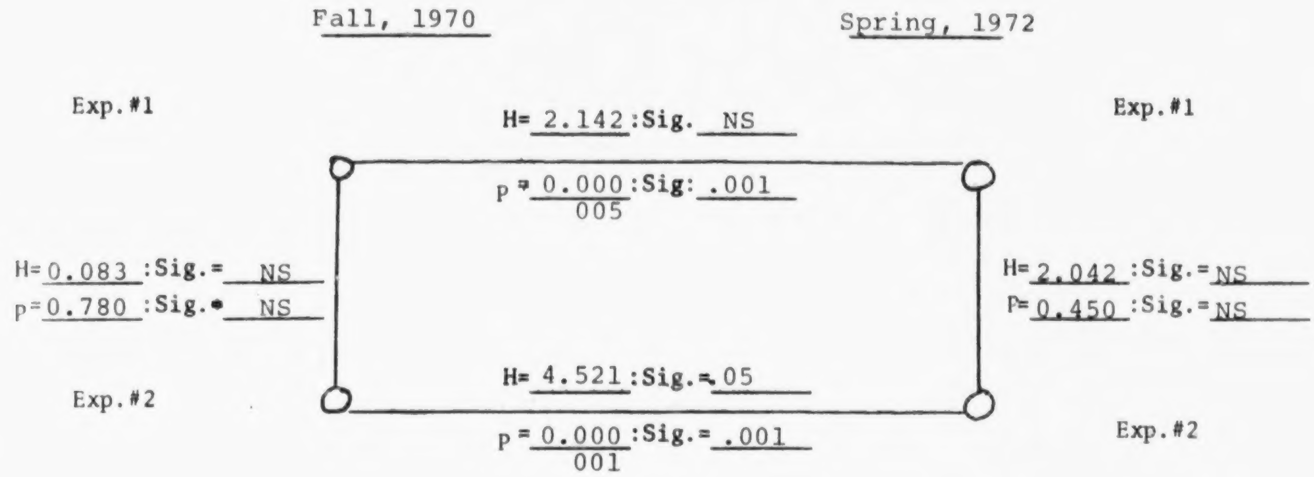

Exp.#1
H= 1.562 :Sig. NS
Exp.#1
p = 0.000 001 :Sig: .001
H= 1.800:Sig.= NS
p= 0.316:Sig.= NS
H=3.681 :Sig.=NS
P=0.152 :Sig.=NS
Exp.#2
H= 3.125 :Sig.= NS
p = 0.078 :Sig.= NS
Exp.#2

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	1 3	H=1.800 Sig.= NS	P =0.316 Sig. NS
Spring, 1972			
Experiment #1 & Experiment #2	6 4	H= 3.681 Sig.= NS	p =0.152 Sig.= NS
Fall, 1970-Spring, 1972			
Experiment #1 & Experiment #1	1 6	H= 1.562 Sig.= NS	P =0.000001 Sig.= .001
Experiment #2 & xperiment #2	3 4	H= 3.125 Sig.= NS	p =0.078 Sig.= NS

CONTENT ANALYSIS DATA

Item 3 : Assign responsibilities to subordinate units.

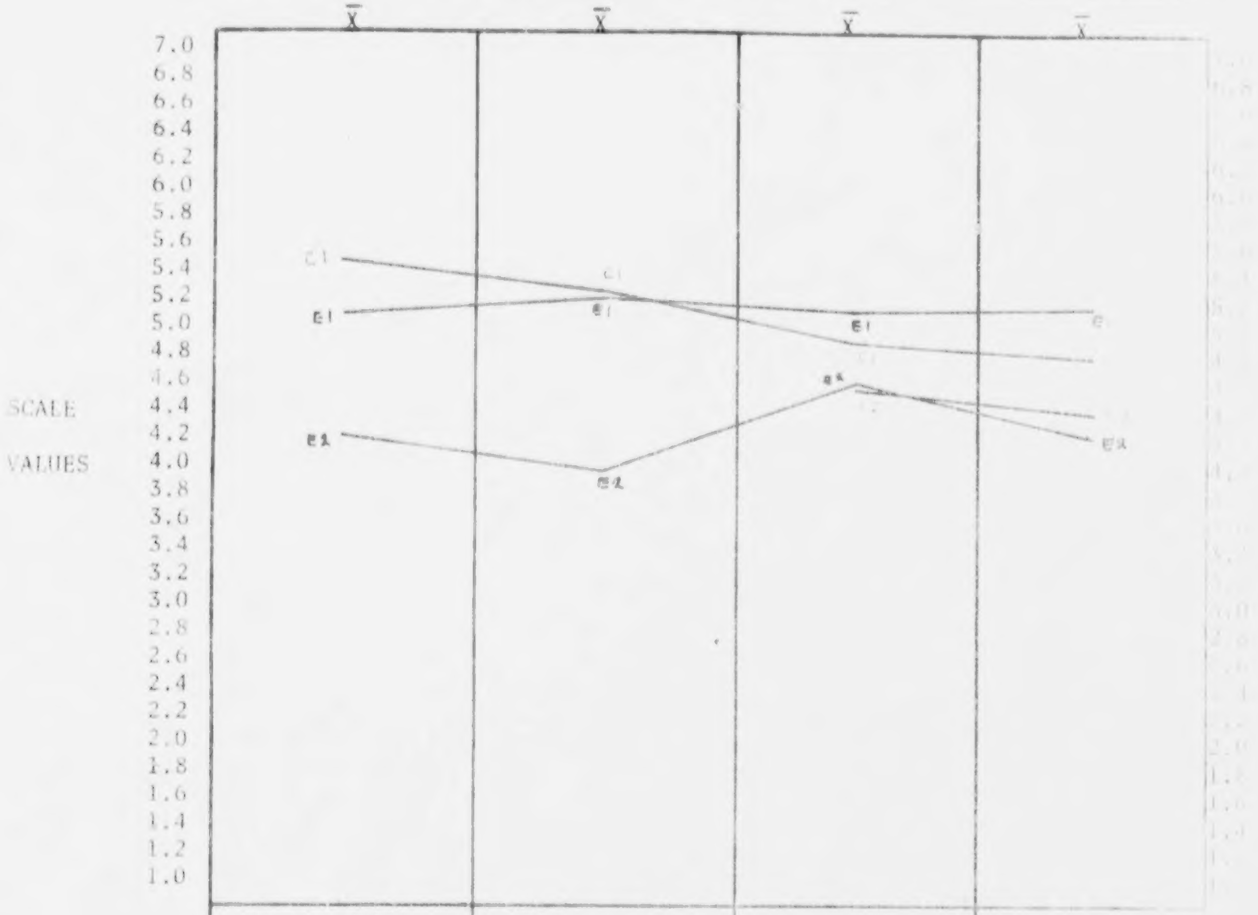
SCHEMATIC PRESENTATION OF ANALYSIS


Fall, 1970
Spring, 1972
Exp.#1
H= 2.142 :Sig. NS
Exp.#1
p = 0.000005 :Sig: .001
H= 0.083 :Sig.= NS
p= 0.780 :Sig.= NS
H= 2.042 :Sig.= NS
P= 0.450 :Sig.= NS
H= 4.521 :Sig.= .05
Exp.#2
p = 0.000001 :Sig.= .001
Exp.#2

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	2 3	H= 0.083 Sig.= NS	P = 0.780 Sig. NS
Spring, 1972			
Experiment #1 & Experiment #2	7 9	H= 2.042 Sig.= NS	p = 0.450 Sig.= NS
Fall, 1970-Spring, 1972			
Experiment #1 & Experiment #1	2 7	H= 2.142 Sig.= NS	p = 0.000005 Sig.= .001
Experiment #2 & xperiment #2	3 9	H= 4.521 Sig.= .05	p = 0.000001 Sig.= .001

QUESTIONNAIRE DATA

Item 7 My organization's policy statements are clear.

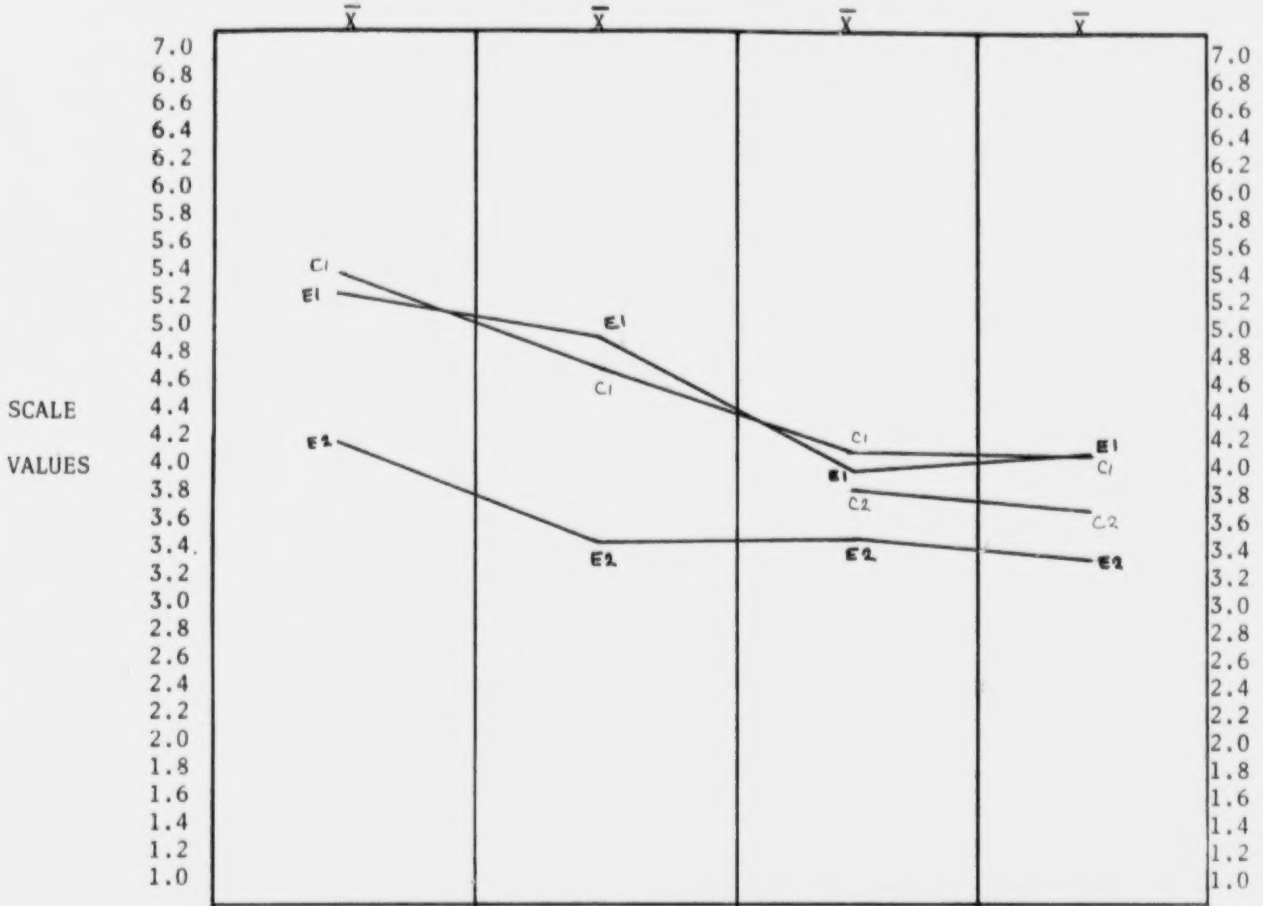


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 197 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	38	5.132	1.547	71	5.239	1.439	68	5.176	1.257	40	5.200	1.18
Experimental SED #2	59	4.237	1.622	51	4.020	1.378	45	4.644	1.264	39	4.230	1.44
Control SED #1	66	5.500	1.113	57	5.298	1.322	67	4.912	1.100	59	4.813	1.370
Control SED #2							61	4.606	1.666	66	4.439	1.34
Total	163			179			241			204		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	1.363	NS	1.183	NS	0.244	NS	2.919	NS
	Row	0.066	NS	0.267	NS	2.915	NS	0.019	NS
Experiment SED#2 W/ Control SED #1	Col.			1.071	NS	2.751	NS	3.471	NS
	Row			21.457	.001	6.726	.01	23.340	.001
Experiment SED#1 W/ Control SED #2	Col.					0.150	NS		
	Row					12.894	.001		
Experiment SED#2 W/ Control SED #2	Col.					2.026	NS		
	Row					0.175	NS		

QUESTIONNAIRE DATA

Item 8 My organization's performance standards are understood.

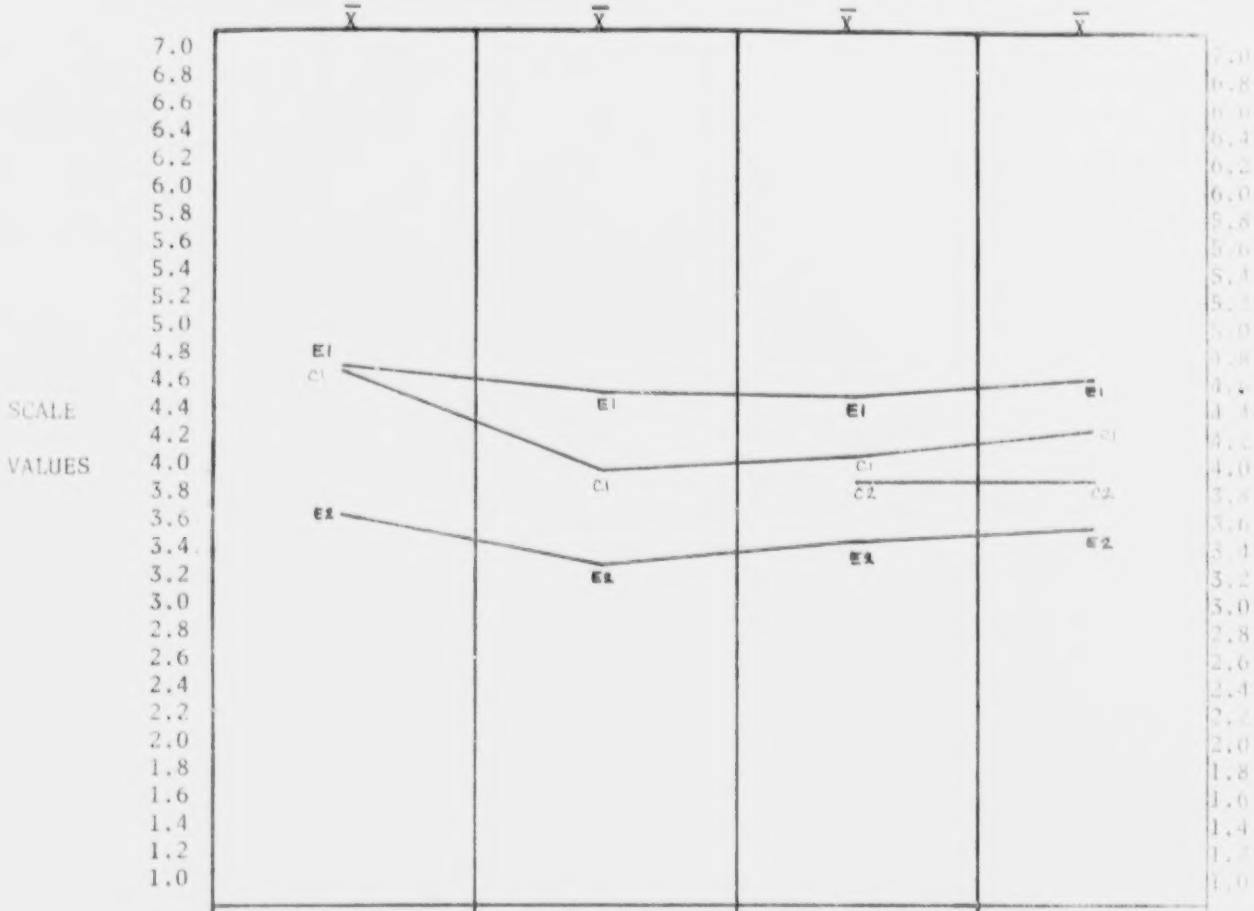


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	36	5.250	1.273	73	4.932	1.456	68	4.056	1.727	38	4.157	1.305
Experimental SED #2	60	4.200	1.634	52	3.442	1.434	45	3.488	1.290	40	3.350	1.406
Control SED #1	66	5.424	1.302	61	4.738	1.365	67	4.104	1.426	59	4.152	1.284
Control SED #2							61	3.850	1.329	66	3.712	1.224
Total	162			186			241			203		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/	Col.	0.003	NS	17.896	.001	0.269	NS	39.989	.001
Control SED #1	Row	7.440	.01	0.142	NS	0.062	NS	0.219	NS
Experiment SED#2 W/	Col.	45.672	.001	2.156	NS	0.056	NS	31.295	.001
Control SED #1	Row	15.005	.001	24.911	.001	13.841	.001	28.566	.001
Experiment SED#1 W/	Col.					0.114	NS		
Control SED #2	Row					1.343	NS		
Experiment SED#2 W/	Col.					1.354	NS		
Control SED #2	Row					5.690	.05		

QUESTIONNAIRE DATA

Item 9 Good ways are used to let me know how I can improve my performance.

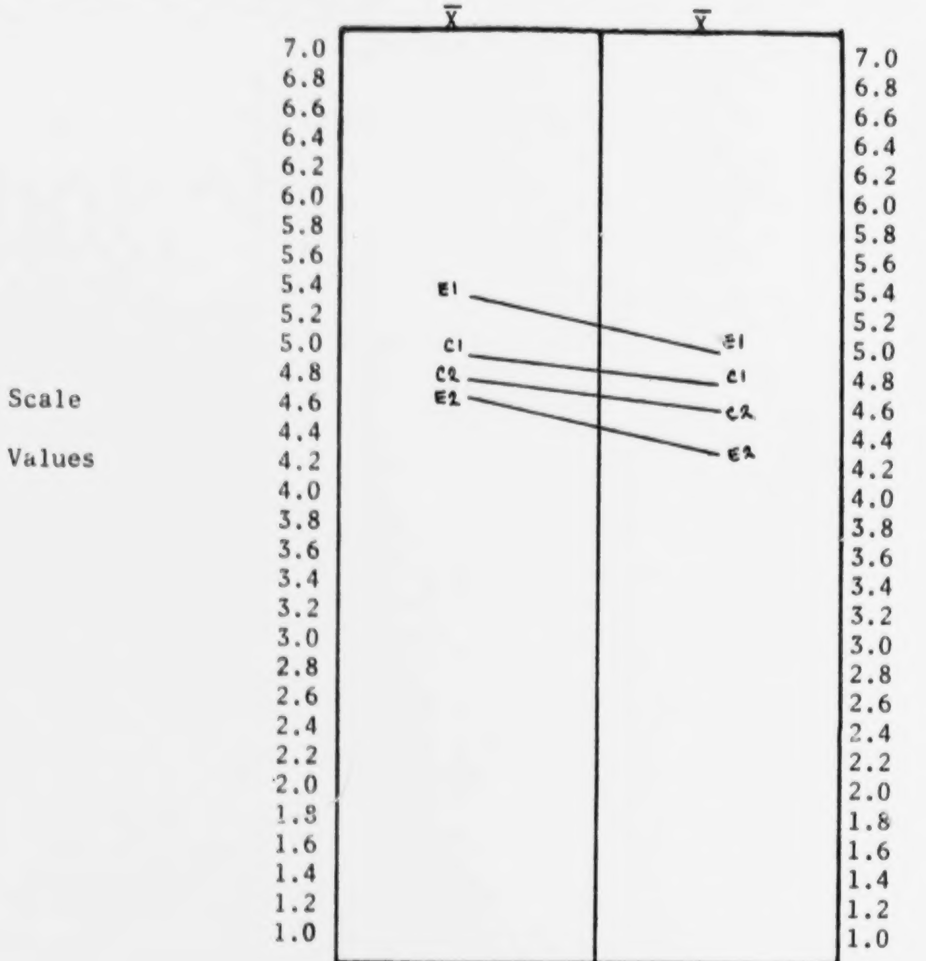


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	4.743	1.229	73	4.575	1.342	68	4.558	1.529	40	4.650	1.369
Experimental SED #2	60	3.666	1.612	52	3.346	1.311	45	3.511	1.471	39	3.615	1.33
Control SED #1	65	4.707	1.588	64	4.015	1.768	67	4.149	1.578	60	4.300	1.42
Control SED #2							61	3.934	1.651	66	3.969	1.46
Total	164			189			241			205		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	4.569	.05	0.096	NS	0.368	NS	1.473	NS
	Row	2.190	NS	6.589	.05	3.629	NS	0.872	NS
Experiment SED#2 W/ Control SED #1	Col.	6.057	.05	0.509	NS	0.378	NS	1.240	NS
	Row	17.286	.001	9.769	.01	10.184	.01	17.529	.001
Experiment SED#1 W/ Control SED #2	Col.					0.097	NS		
	Row					10.343	.01		
Experiment SED#2 W/ Control SED #2	Col.					0.108	NS		
	Row					3.381	NS		

QUESTIONNAIRE DATA

Item 10 I understand what results must be produced to achieve the stated objectives of this organization.



	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental SED#1	68	5.397	1.457	40	5.075	1.163
Experimental SED#2	45	4.688	1.427	40	4.325	1.456
Control SED#1	67	4.955	1.353	60	4.800	1.493
Control SED#2	61	4.803	1.661	65	4.615	1.270
Total	241			205		

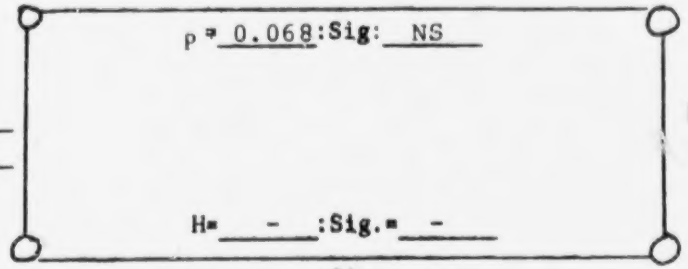
Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1 W/Control SED#1	Col.	1.649	NS
	Row	3.720	NS
Experiment SED#2 W/Control SED#1	Col.	1.673	NS
	Row	3.413	NS
Experiment SED#1 W/Control SED#2	Col.	7.693	.01
	Row	1.802	NS
Experiment SED#2 W/Control SED#2	Col.	1.807	NS
	Row	0.972	NS

CONTENT ANALYSIS DATA

Item 1 : Role of Planning Unit - Awareness of need to evaluate our programs.

SCHEMATIC PRESENTATION OF ANALYSIS

Fall, 1971 Spring, 1972



Exp.#1 Exp.#1

H= 1.500 :Sig. NS

p = 0.068 :Sig: NS

H= - :Sig.= -
p = - :Sig.= -

H= 0.750 :Sig.= NS
P= 0.924 :Sig.= NS

H= - :Sig.= -

Exp.#2 Exp.#2

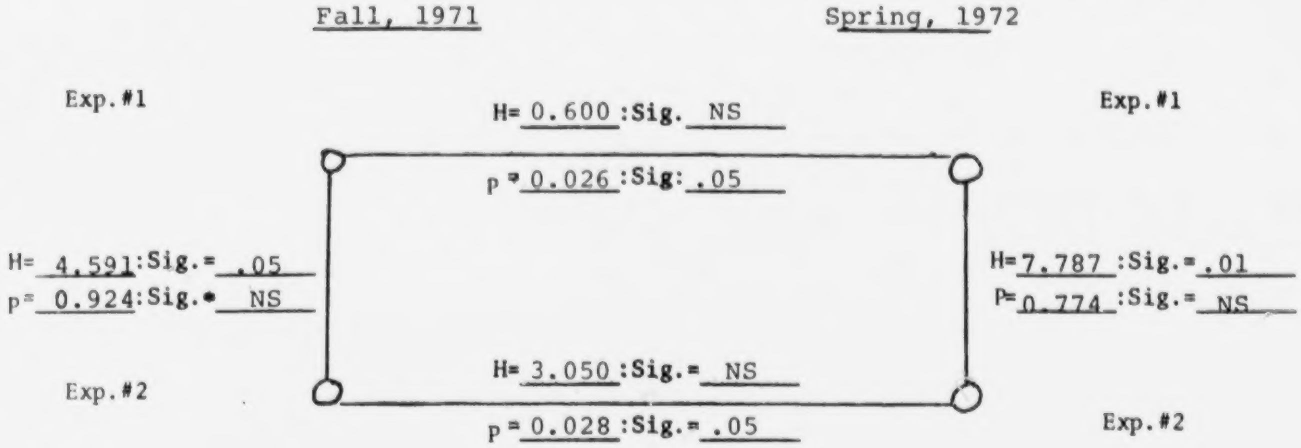
p = - :Sig.= -

Fall, 1971	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	0 0	H= - Sig.= -	P = - Sig.-
Spring, 1972			
Experiment #1 & Experiment #2	2 3	H= 0.750 Sig.= NS	p = 0.924 Sig.= NS
Fall, 1971-Spring, 1972			
Experiment #1 & Experiment #1	1 2	H= 1.500 Sig.= NS	p = 0.068 Sig.= NS
Experiment #2 & xperiment #2	0 3	H= - Sig.= -	p = - Sig.= -

CONTENT ANALYSIS DATA

Item 2 : Role of Planning Unit - Available to answer planning questions.

SCHEMATIC PRESENTATION OF ANALYSIS

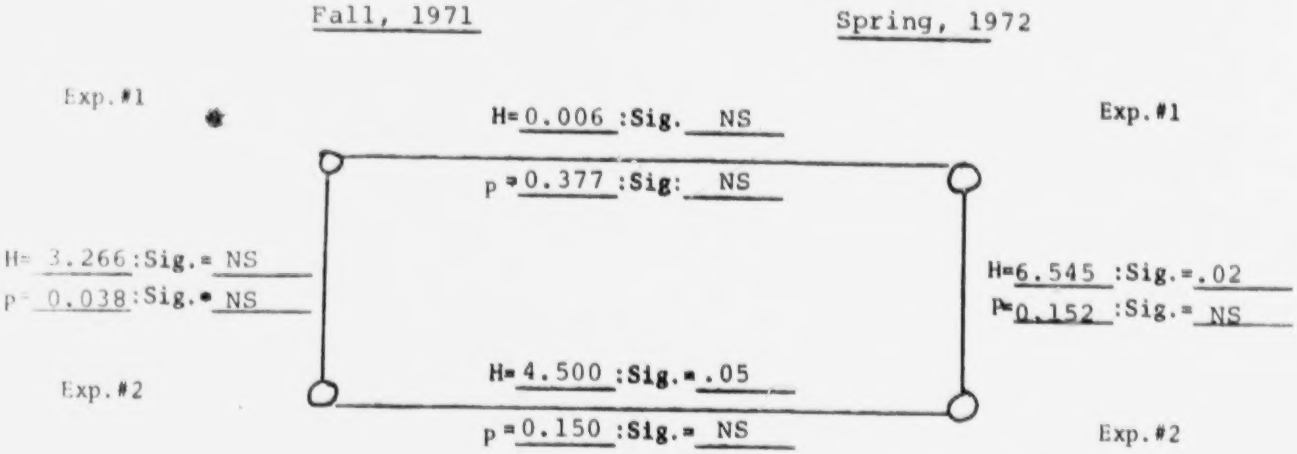

Fall, 1971
Spring, 1972
Exp.#1
H= 0.600 :Sig. NS
Exp.#1
p = 0.026 :Sig: .05
H= 4.591:Sig.= .05
p= 0.924:Sig.= NS
H=7.787 :Sig.= .01
P=0.774 :Sig.= NS
Exp.#2
H= 3.050 :Sig.= NS
p = 0.028 :Sig.= .05
Exp.#2

Fall, 1971	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	6 7	H= 4.591 Sig.= .05	P = 0.924 Sig. NS
Spring, 1972			
Experiment #1 & Experiment #2	8 9	H= 7.787 Sig.= .01	p = 0.774 Sig.= NS
Fall, 1971-Spring, 1972			
Experiment #1 & Experiment #1	6 8	H= 0.600 Sig.= NS	p = 3.050 Sig.= NS
Experiment #2 & xperiment #2	7 9	H= 0.026 Sig.= .05	p = 0.028 Sig.= .05

CONTENT ANALYSIS DATA

Item 3 : Role of Planning Unit - Writing guidelines for plan development.

SCHEMATIC PRESENTATION OF ANALYSIS


Fall, 1971
Spring, 1972
Exp.#1
H=0.006 :Sig. NS
Exp.#1
p =0.377 :Sig: NS
H= 3.266 :Sig.= NS
p= 0.038 :Sig.= NS
H=6.545 :Sig.=.02
P=0.152 :Sig.= NS
Exp.#2
H=4.500 :Sig.= .05
p =0.150 :Sig.= NS
Exp.#2

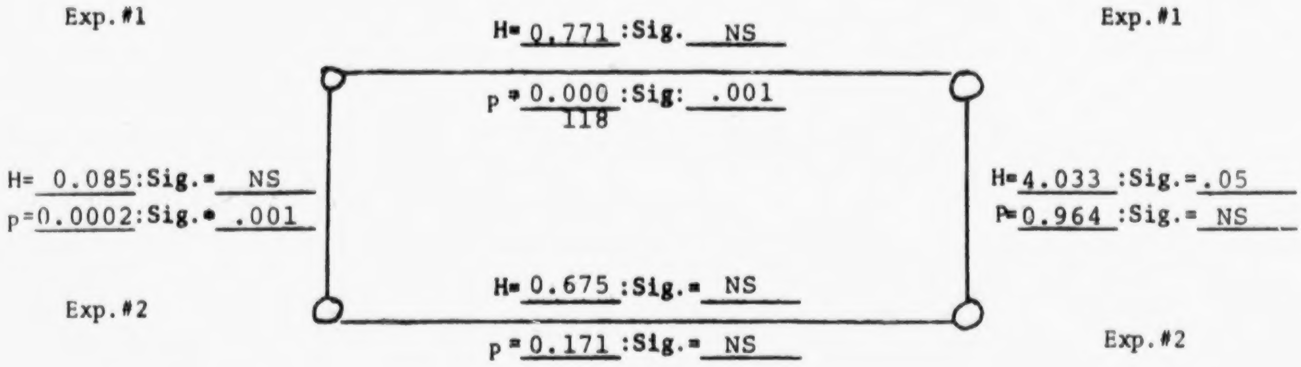
Fall, 1971	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	6 3	H= 3.266 Sig.= NS	P = 0.038 Sig. NS
Spring, 1972			
Experiment #1 & Experiment #2	6 4	H= 6.545 Sig.=.02	p = 0.152 Sig.= NS
Fall, 1971- Spring, 1972			
Experiment #1 & Experiment #1	6 6	H= 0.006 Sig.= NS	p = 0.377 Sig.= NS
Experiment #2 & xperiment #2	3 4	H= 4.500 Sig.= .05	p = 0.150 Sig.= NS

CONTENT ANALYSIS DATA

Item 4 : Role of Planning Unit - Reviewing and refining plans.

SCHEMATIC PRESENTATION OF ANALYSIS

Fall, 1971 Spring, 1972

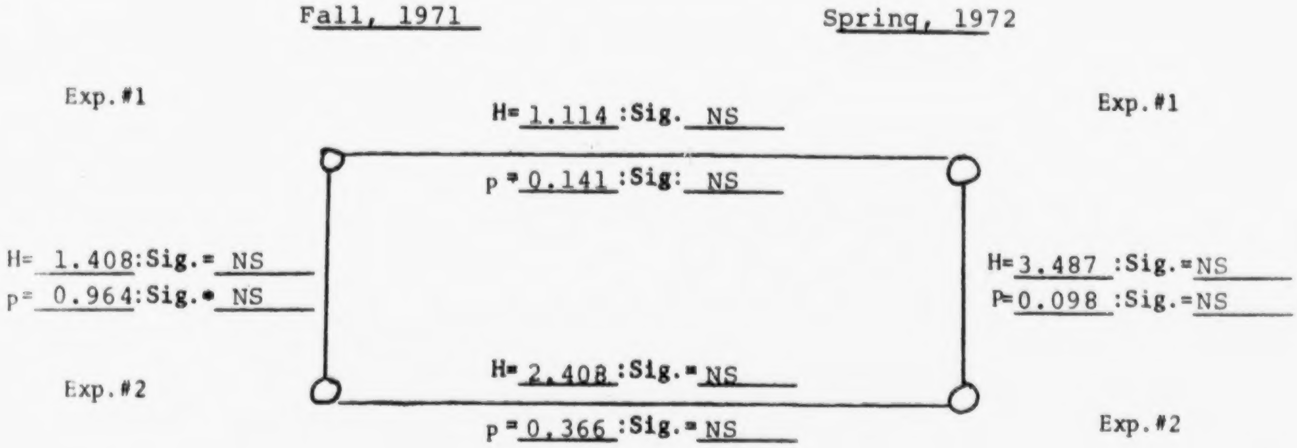

Exp.#1
H= 0.771 :Sig. NS
Exp.#1
p = 0.000118 :Sig: .001
H= 0.085:Sig.= NS
p=0.0002:Sig.= .001
H=4.033 :Sig.=.05
P=0.964 :Sig.= NS
H= 0.675 :Sig.= NS
Exp.#2
p = 0.171 :Sig.= NS
Exp.#2

Fall, 1971	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	1 5	H= 0.085 Sig.= NS	P = 0.002 Sig. .001
Spring, 1972			
Experiment #1 & Experiment #2	5 6	H= 4.033 Sig.= .05	p = 0.964 Sig.= NS
Fall, 1971- Spring, 1972			
Experiment #1 & Experiment #1	1 5	H= 0.771 Sig.= NS	p = 0.000118 Sig.= .001
Experiment #2 & xperiment #2	5 6	H= 0.675 Sig.= NS	p = 0.171 Sig.= NS

CONTENT ANALYSIS DATA

Item 5 : Role of Planning Unit - Provides leadership in the implementation of planning.

SCHEMATIC PRESENTATION OF ANALYSIS

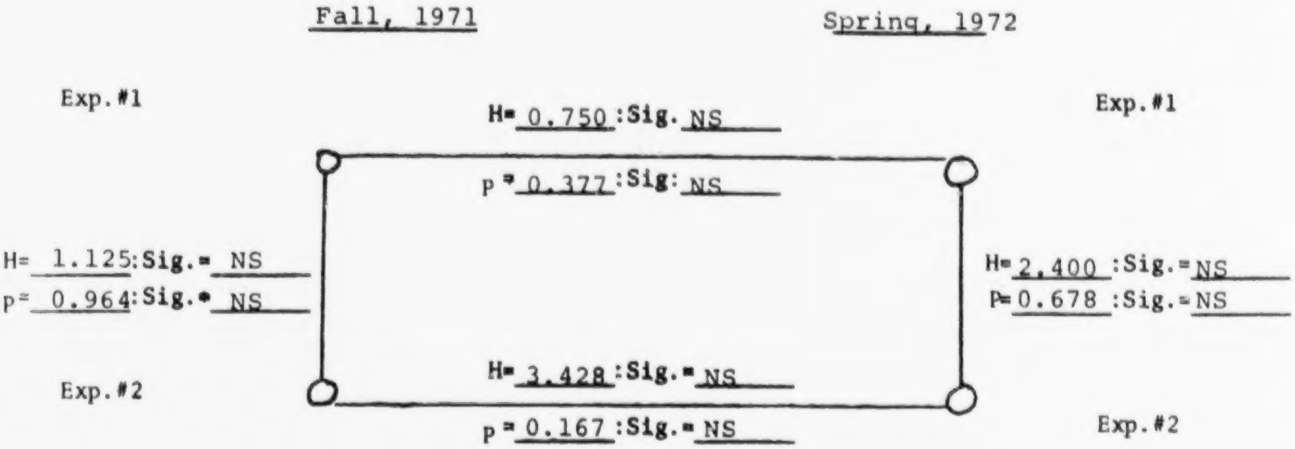

Fall, 1971
Spring, 1972
Exp.#1
H= 1.114 :Sig. NS
Exp.#1
p = 0.141 :Sig: NS
H= 1.408:Sig.= NS
p= 0.964:Sig.= NS
H=3.487 :Sig.=NS
P=0.098 :Sig.=NS
Exp.#2
H= 2.408 :Sig.= NS
p = 0.366 :Sig.= NS
Exp.#2

Fall, 1971	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	5 6	H= 1.408 Sig.= NS	P = 0.964 Sig. NS
Spring, 1972			
Experiment #1 & Experiment #2	7 5	H= 3.487 Sig.= NS	P = 0.098 Sig.= NS
Fall, 1971- Spring, 1972			
Experiment #1 & Experiment #1	5 7	H= 1.114 Sig.= NS	p = 0.141 Sig.= NS
Experiment #2 & xperiment #2	6 5	H= 2.408 Sig.= NS	p = 0.366 Sig.= NS

CONTENT ANALYSIS DATA

Item 6 : Role of Planning Unit - Provides in-service training in planning.

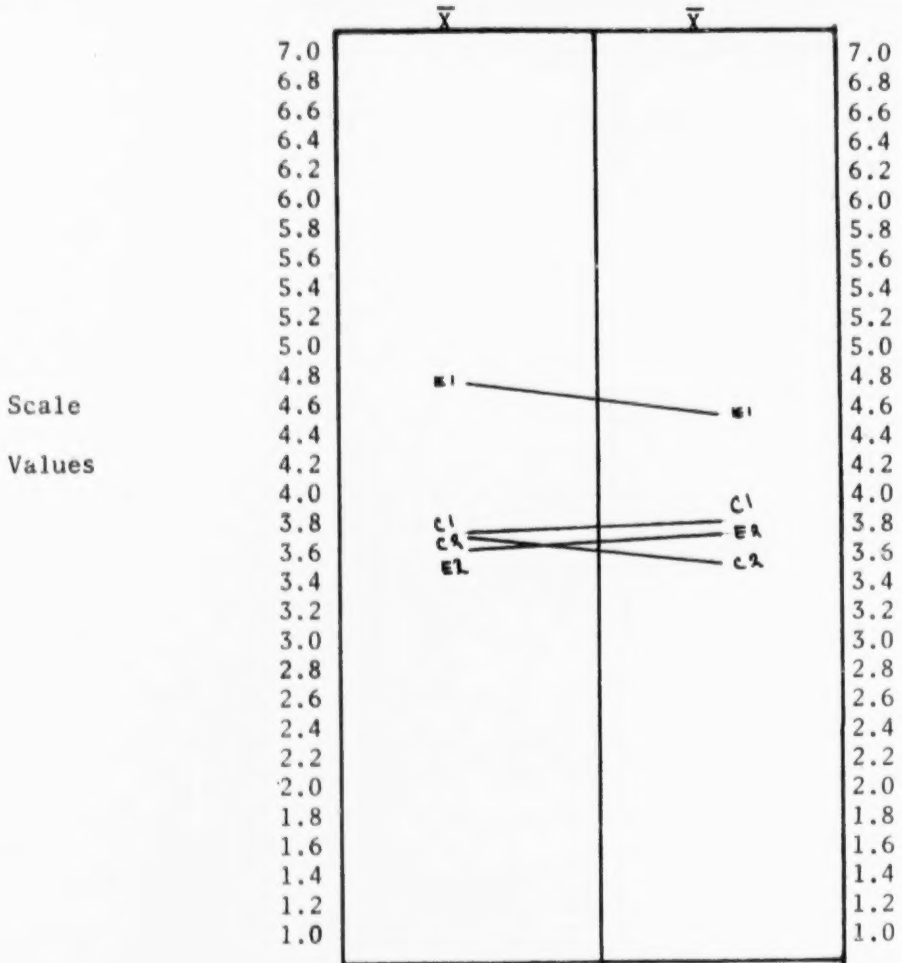
SCHEMATIC PRESENTATION OF ANALYSIS


Fall, 1971
Spring, 1972
Exp.#1
H= 0.750 :Sig. NS
Exp.#1
p = 0.377 :Sig: NS
H= 1.125:Sig.= NS
p= 0.964:Sig.= NS
H= 2.400 :Sig.= NS
P= 0.678 :Sig.= NS
Exp.#2
H= 3.428 :Sig.= NS
p = 0.167 :Sig.= NS
Exp.#2

Fall, 1971	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	3 4	H= 1.125 Sig.= NS	P = 0.964 Sig. NS
Spring, 1972			
Experiment #1 & Experiment #2	2 2	H= 2.400 Sig.= NS	p = 0.678 Sig.= NS
Fall, 1971-Spring, 1972			
Experiment #1 & Experiment #1	3 2	H= 0.750 Sig.= NS	p = 0.377 Sig.= NS
Experiment #2 & xperiment #2	4 2	H= 3.428 Sig.= NS	p = 0.167 Sig.= NS

QUESTIONNAIRE DATA

Item 7 The planning unit has been helpful to me.



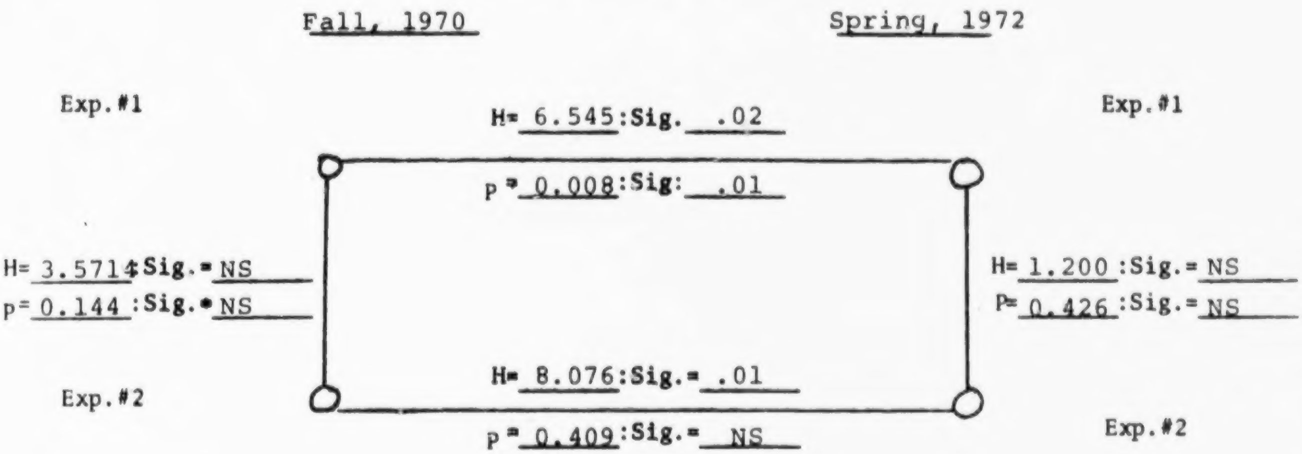
	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental SED#1	68	4.867	1.930	38	4.631	1.328
Experimental SED#2	45	3.644	1.734	40	3.750	1.497
Control SED#1	67	3.746	1.778	53	3.849	1.472
Control SED#2	61	3.737	1.731	64	3.593	1.466
Total	241			195		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1	Col.	0.082	NS
W/Control SED#1	Row	16.908	.001
Experiment SED#2	Col.	0.198	NS
W/Control SED#1	Row	0.184	NS
Experiment SED#1	Col.	0.712	NS
W/Control SED#2	Row	23.185	.001
Experiment SED#2	Col.	0.007	NS
W/Control SED#2	Row	0.019	NS

CONTENT ANALYSIS DATA

Item 1 : Designed a methodology by which future performance may be evaluated in relation to the performance specified in the plan.

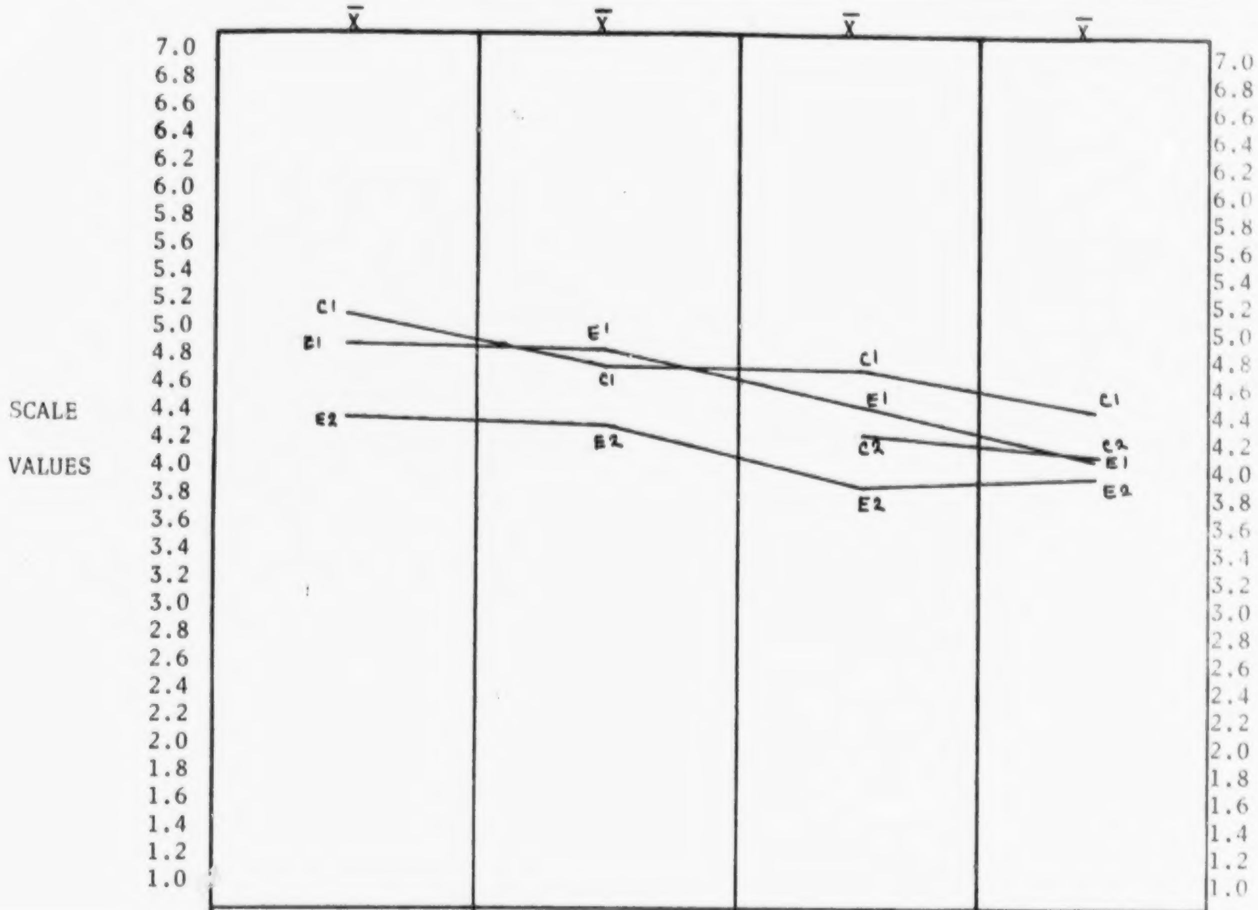
SCHEMATIC PRESENTATION OF ANALYSIS


Fall, 1970
Spring, 1972
Exp.#1
H= 6.545:Sig. .02
Exp.#1
p = 0.008:Sig: .01
H= 3.5714:Sig.= NS
p= 0.144 :Sig.= NS
H= 1.200 :Sig.= NS
P= 0.426 :Sig.= NS
H= 8.076:Sig.= .01
Exp.#2
p = 0.409:Sig.= NS
Exp.#2

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	4 7	H= 3.5714 Sig.= NS	P = 0.144 Sig. NS
Spring, 1972			
Experiment #1 & Experiment #2	6 5	H= 1.200 Sig.= NS	p = 0.426 Sig.= NS
Fall, 1970-Spring, 1972			
Experiment #1 & Experiment #1	4 6	H= 6.545 Sig.= .02	p = 0.008 Sig.= .01
Experiment #2 & xperiment #2	7 5	H= 8.076 Sig.= .01	p = 0.409 Sig.= NS

QUESTIONNAIRE DATA

Item 7 I have good ways for knowing how good our results are.

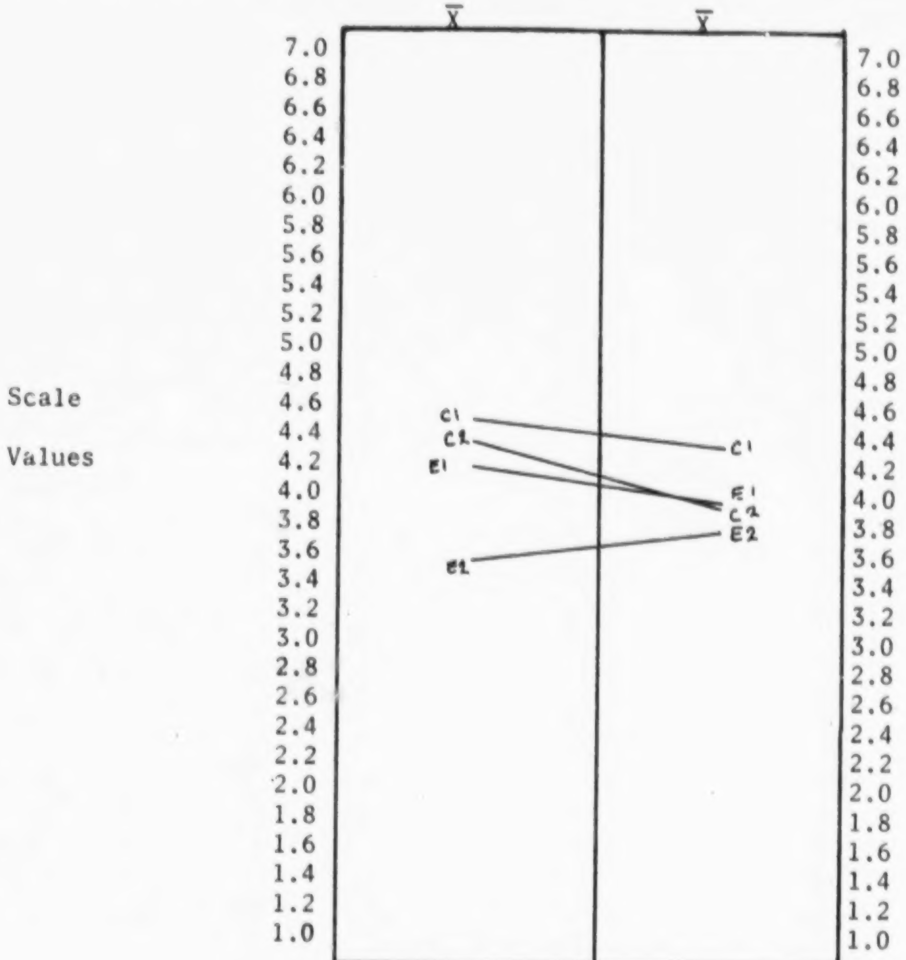


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED #1	39	4.974	1.202	73	4.876	1.290	68	4.485	1.151	39	4.102	1.231
Experimental SED #2	60	4.450	1.419	50	4.360	1.289	45	3.911	1.164	40	4.050	1.218
Control SED #1	65	5.138	1.073	64	4.796	1.449	67	4.761	1.142	61	4.475	1.324
Control SED #2							61	4.295	1.308	66	4.141	1.289
Total	164			187			241			206		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/	Col.	1.706	NS	1.687	NS	3.583	NS	19.457	.001
Control SED #1	Row	0.062	NS	0.355	NS	3.374	NS	2.381	NS
Experiment SED#2 W/	Col.	1.591	NS	1.991	NS	0.185	NS	9.602	.01
Control SED #1	Row	10.818	.01	14.046	.001	14.013	.001	10.542	.01
Experiment SED#1 W/	Col.					3.489	NS		
Control SED #2	Row					0.650	NS		
Experiment SED#2 W/	Col.					0.196	NS		
Control SED #2	Row					0.897	NS		

QUESTIONNAIRE DATA

Item 8 My organization has reliable ways for knowing how well it is attaining its objectives.



	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	4.220	1.563	39	4.076	1.305
Experimental SED#2	45	3.600	1.232	40	3.800	1.505
Control SED#1	67	4.552	1.282	61	4.393	1.440
Control SED#2	61	4.409	1.464	66	3.969	1.335
Total	241			206		

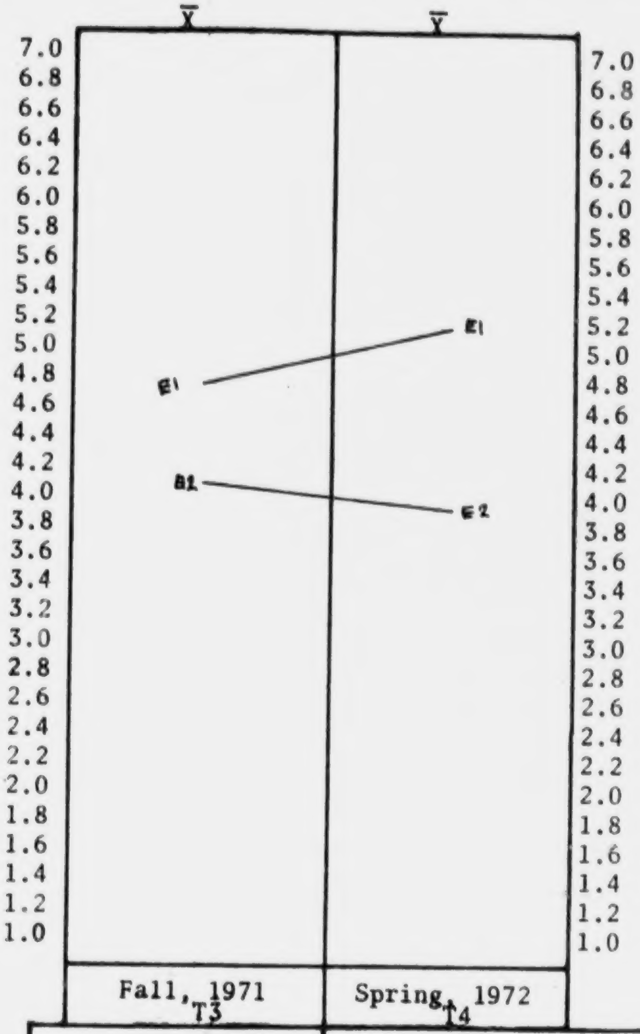
Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1 W/Control SED#1	Col.	0.638	NS
	Row	2.933	NS
Experiment SED#2 W/Control SED#1	Col.	0.011	NS
	Row	16.371	.001
Experiment SED#1 W/Control SED#2	Col.	2.304	NS
	Row	0.045	NS
Experiment SED#2 W/Control SED#2	Col.	0.380	NS
	Row	6.335	.05

QUESTIONNAIRE DATA

Item 9 I think that the objectives developed during AMA training are clearly stated with respect to results expected.

Scale

Values



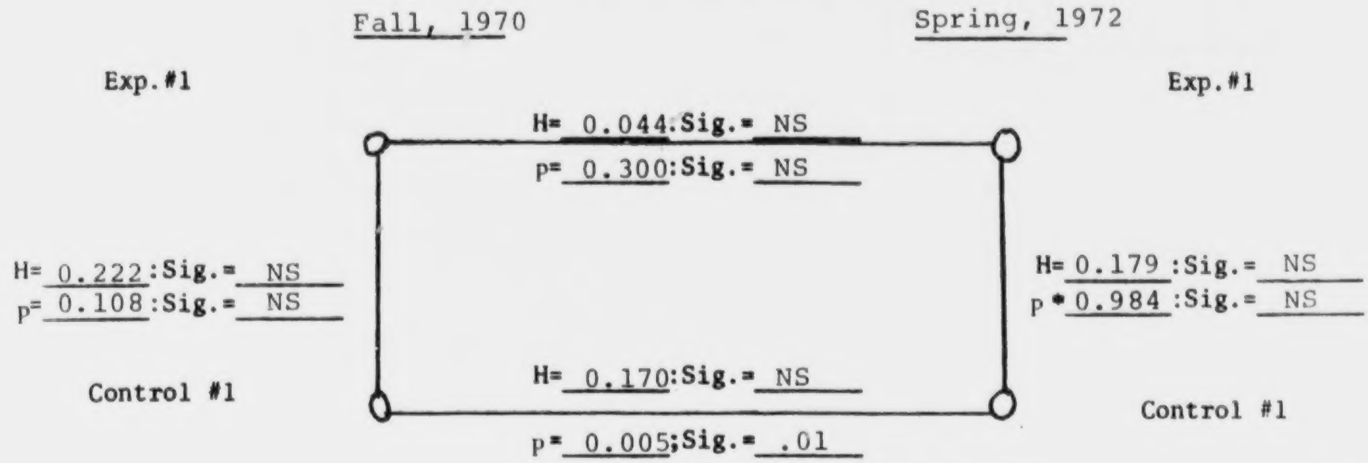
	Fall, 1971 T3			Spring, 1972 T4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experimental SED#1	68	4.838	1.767	39	5.205	1.128
Experimental SED#2	45	4.177	1.466	39	3.948	1.571
Total	113			78		

Two Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental SED#1	Col.	0.090	NS
W/Experimental SED#2	Row	17.463	.001

CONTENT ANALYSIS DATA

Item 1 : Adequate Resources (money and information)

SCHEMATIC PRESENTATION OF ANALYSIS



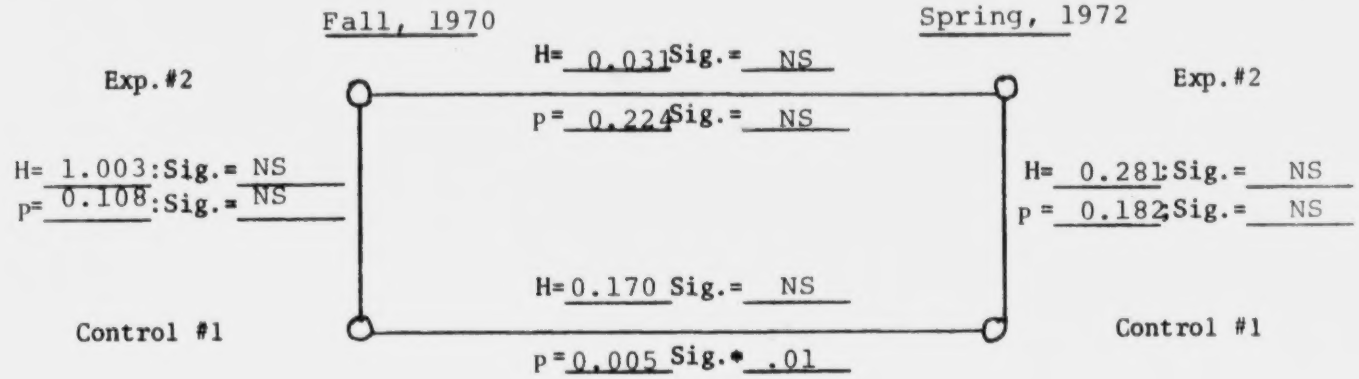
Fall, 1970
Spring, 1972
Exp.#1
Exp.#1
Control #1
Control #1

H= 0.044:Sig.= NS
p= 0.300:Sig.= NS

H= 0.222:Sig.= NS
p= 0.108:Sig.= NS

H= 0.179 :Sig.= NS
p= 0.984 :Sig.= NS

H= 0.170:Sig.= NS
p= 0.005;Sig.= .01



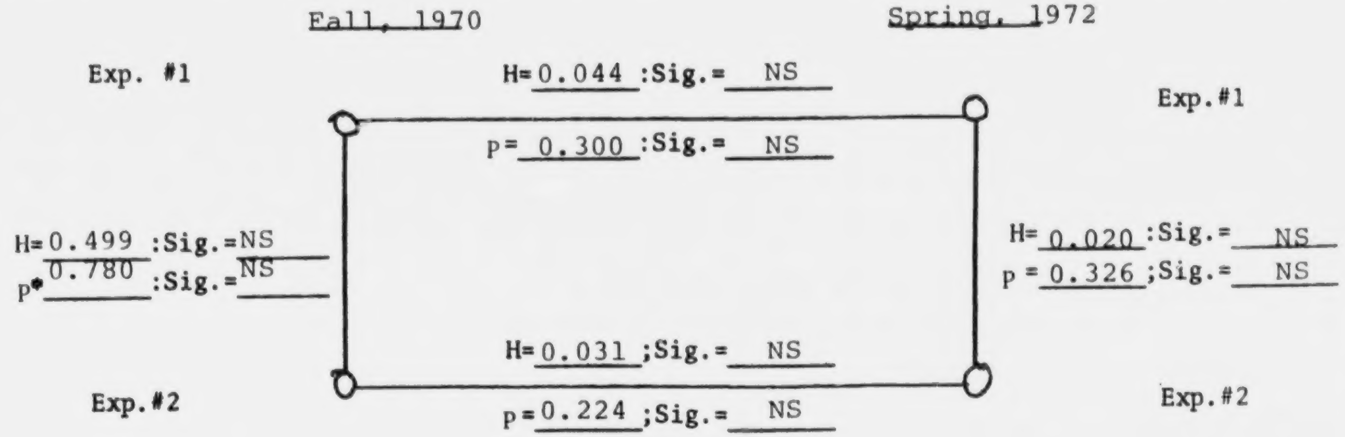
Fall, 1970
Spring, 1972
Exp.#2
Exp.#2
Control #1
Control #1

H= 0.031 Sig.= NS
p= 0.224 Sig.= NS

H= 1.003:Sig.= NS
p= 0.108:Sig.= NS

H= 0.281:Sig.= NS
p = 0.182;Sig.= NS

H=0.170 Sig.= NS
p=0.005 Sig.= .01



Fall, 1970
Spring, 1972
Exp. #1
Exp.#1
Exp.#2
Exp.#2

H=0.044 :Sig.= NS
p= 0.300 :Sig.= NS

H=0.499 :Sig.=NS
p= 0.780 :Sig.=NS

H= 0.020 :Sig.= NS
p = 0.326 ;Sig.= NS

H=0.031 ;Sig.= NS
p=0.224 ;Sig.= NS

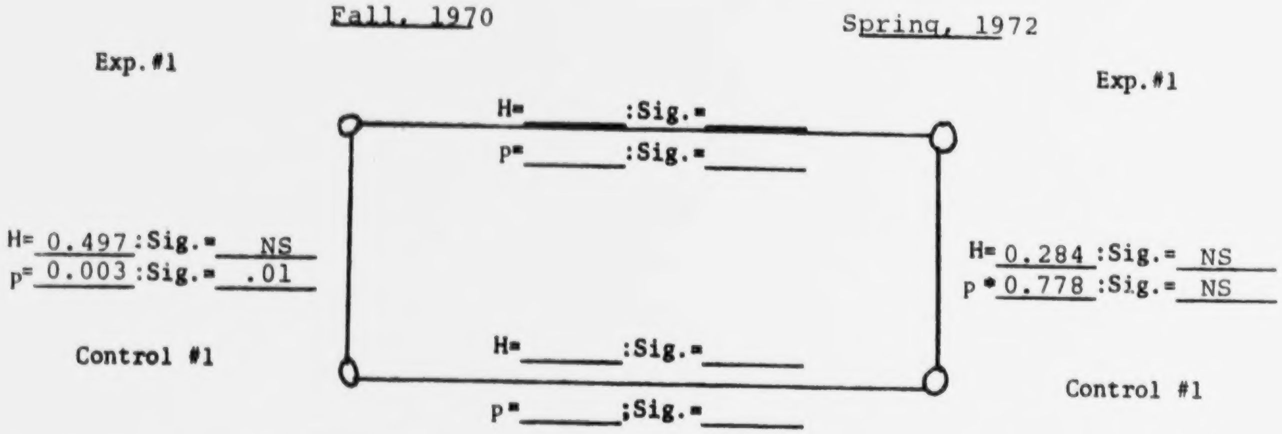
Item 1 : Adequate Resources (money and information)

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binominal Test of Proportions
Experiment#1 & Control #1	9 6	H= 0.222 Signif.= NS	P = 0.108 Signif.= NS
Experiment#2 & Control #1	9 6	H= 1.003 Signif.= NS	p = 0.108 Signif.= NS
Experiment#1 & Experiment#2	9 9	H= 0.499 Signif.= NS	P= 0.780 Signif.= NS
Spring, 1972			
Experiment#1 & Control #1	7 9	H= 0.179 Signif.= NS	P= 0.984 Signif.= NS
Experiment#2 & Control #1	6 9	H= 0.281 Signif.= NS	P= 0.182 Signif.= NS
Experiment#1 & Experiment#2	7 6	H= 0.020 Signif.= NS	P= 0.326 Signif.= NS
Fall, 1970- Spring, 1972			
Experiment #1 & Experiment #1	9 7	H= 0.044 Signif.= NS	p= 0.300 Signif.= NS
Experiment #2 & Experiment #2	9 6	H= 0.031 Signif.= NS	p= 0.224 Signif= NS
Control#1 & Control#1	6 9	H= 0.170 Signif.= NS	p = 0.005 Signif.= .01

CONTENT ANALYSIS DATA

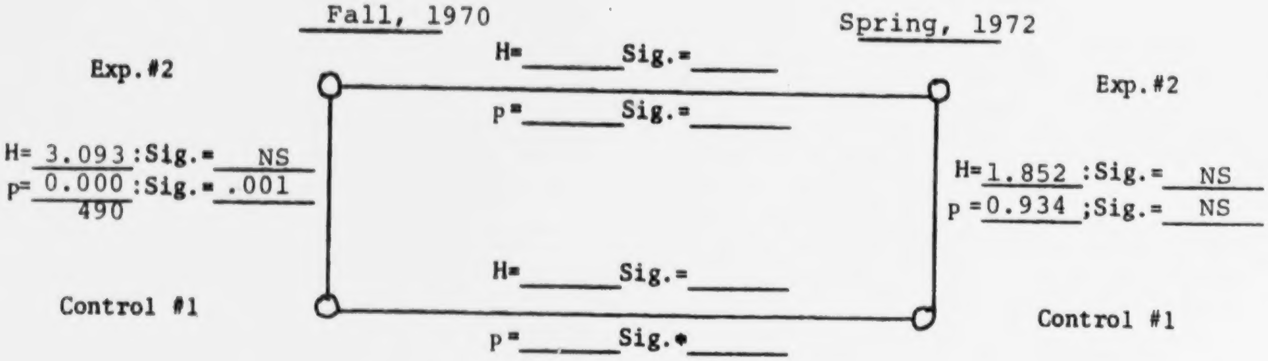
Item 2 : Control System expressed through decision making process.

SCHEMATIC PRESENTATION OF ANALYSIS


Fall, 1970
Spring, 1972
Exp. #1
Exp. #1
H= :Sig.=
p= :Sig.=
H= :Sig.=
p= ;Sig.=
Control #1
Control #1

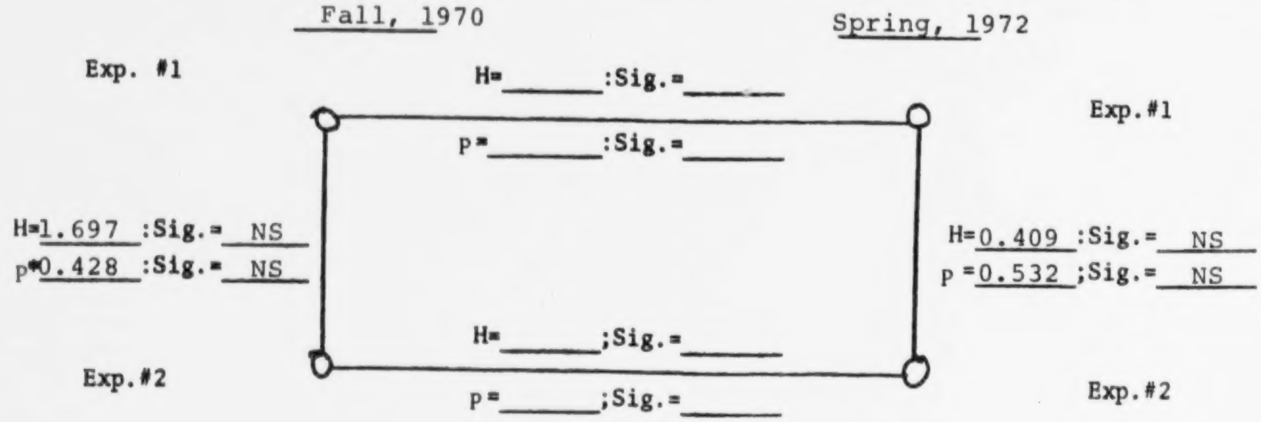
H= 0.497 :Sig.= NS
p= 0.003 :Sig.= .01

H= 0.284 :Sig.= NS
p = 0.778 :Sig.= NS


Fall, 1970
Spring, 1972
Exp. #2
Exp. #2
H= Sig.=
p= Sig.=
H= Sig.=
p= Sig.=
Control #1
Control #1

H= 3.093 :Sig.= NS
p= 0.000 490 :Sig.= .001

H= 1.852 :Sig.= NS
p = 0.934 ;Sig.= NS


Fall, 1970
Spring, 1972
Exp. #1
Exp. #1
H= :Sig.=
p= :Sig.=
H= ;Sig.=
p= ;Sig.=
Exp. #2
Exp. #2

H= 1.697 :Sig.= NS
p= 0.428 :Sig.= NS

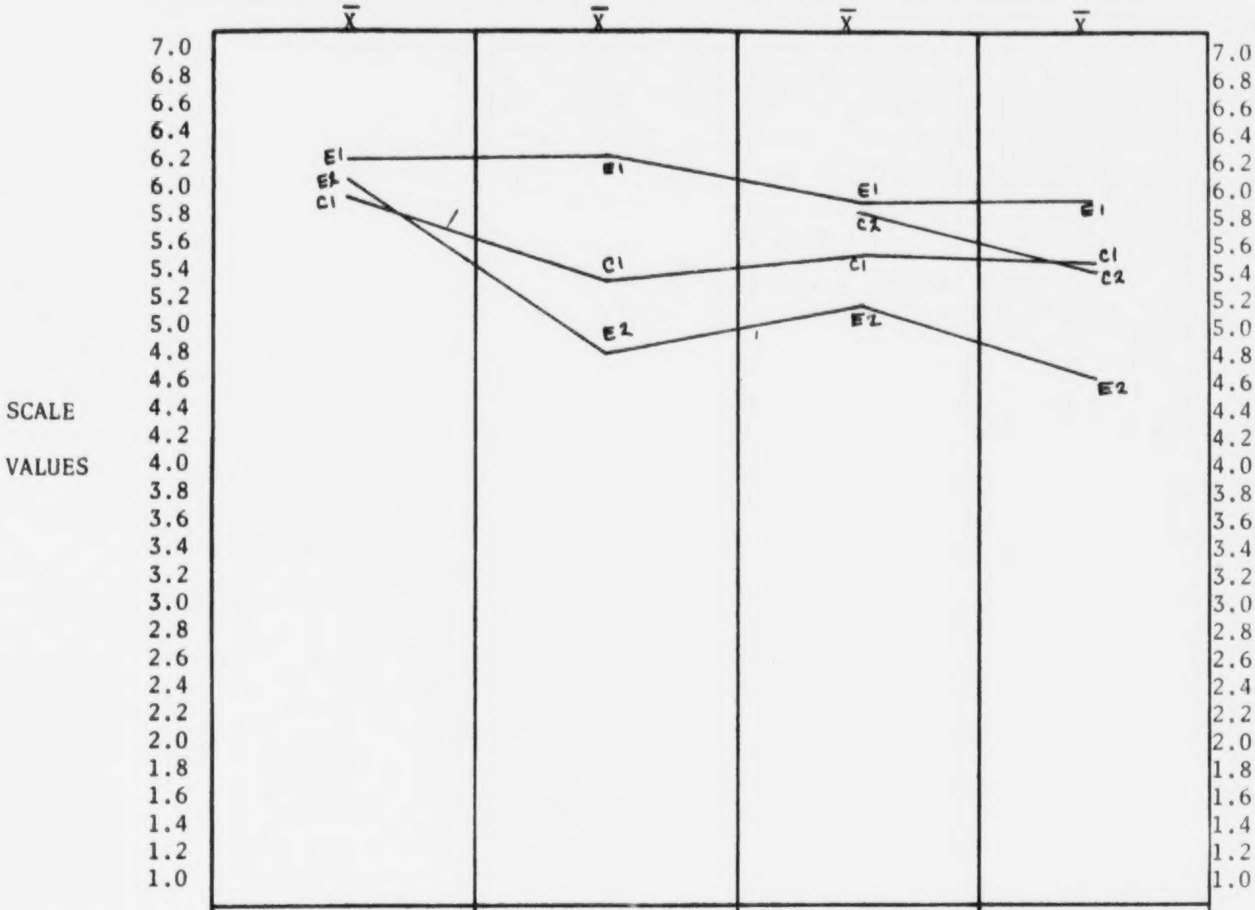
H= 0.409 :Sig.= NS
p = 0.532 ;Sig.= NS

Item 2 : Control System expressed through decision making process.

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binominal Test of Proportions
Experiment#1 & Control #1	10 6	H=0.497 Signif.= NS	P = 0.003 Signif.= .01
Experiment#2 & Control #1	11 6	H=3.093 Signif.= NS	P = 0.000490 Signif.= .001
Experiment#1 & Experiment#2	10 11	H=1.697 Signif.= NS	P= 0.428 Signif.= NS
Spring, 1972			
Experiment#1 & Control #1	4 6	H=0.284 Signif.= NS	P=0.778 Signif.= NS
Experiment#2 & Control #1	6 6	H=1.852 Signif.= NS	P=0.934 Signif.= NS
Experiment#1 & Experiment#2	4 6	H= 0.409 Signif.= NS	P= 0.532 Signif.= NS
Fall, 1970- Spring, 1972			
Experiment #1 & Experiment #1	10 4	H= 0.980 Signif.= NS	p=0.008 Signif.= .01
Experiment #2 & Experiment #2	11 6	H= 0.911 Signif.= NS	p= 0.006 Signif= .01
Control#1 & Control#1	6 6	H= 0.314 Signif.= NS	P = 0.274 Signif.= NS

QUESTIONNAIRE DATA

Item 3 My manager makes it clear that he is committed to the success of our projects.

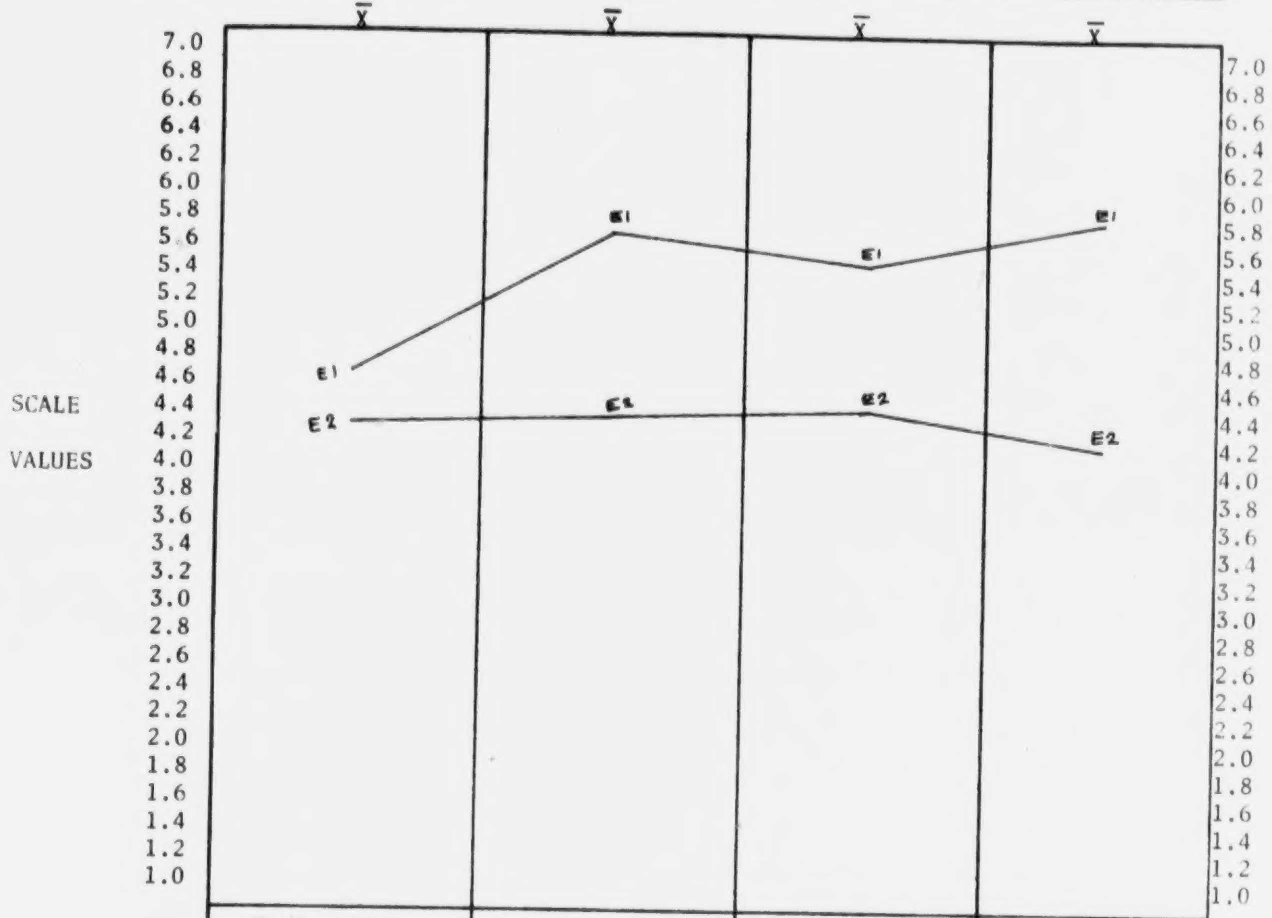


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED #1	39	6.256	0.938	73	6.260	0.850	68	5.955	1.164	40	5.972	1.012
Experimental SED #2	60	6.100	0.933	52	4.846	1.539	45	5.222	1.535	39	4.692	1.608
Control SED #1	66	6.030	1.007	61	5.393	1.497	67	5.895	1.129	61	5.442	1.284
Control SED #2							61	5.573	1.627	66	5.530	1.192
Total	165			186			241					

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/	Col.	13.847	.001	0.816	NS	1.737	NS	6.546	.01
Control SED #1	Row	4.645	.05	11.622	.001	3.967	.05	7.060	.01
Experiment SED#2 W/	Col.	2.133	NS	5.930	.05	6.583	.05	37.291	.001
Control SED #1	Row	33.424	.001	8.892	.01	13.813	.001	4.213	.05
Experiment SED#1 W/	Col.					0.000	NS		
Control SED #2	Row					6.154	.05		
Experiment SED#2 W/	Col.					1.890	NS		
Control SED #2	Row					8.134	.01		

QUESTIONNAIRE DATA

Item 4 My manager has expressed the belief that the AMA's training program has been helpful.

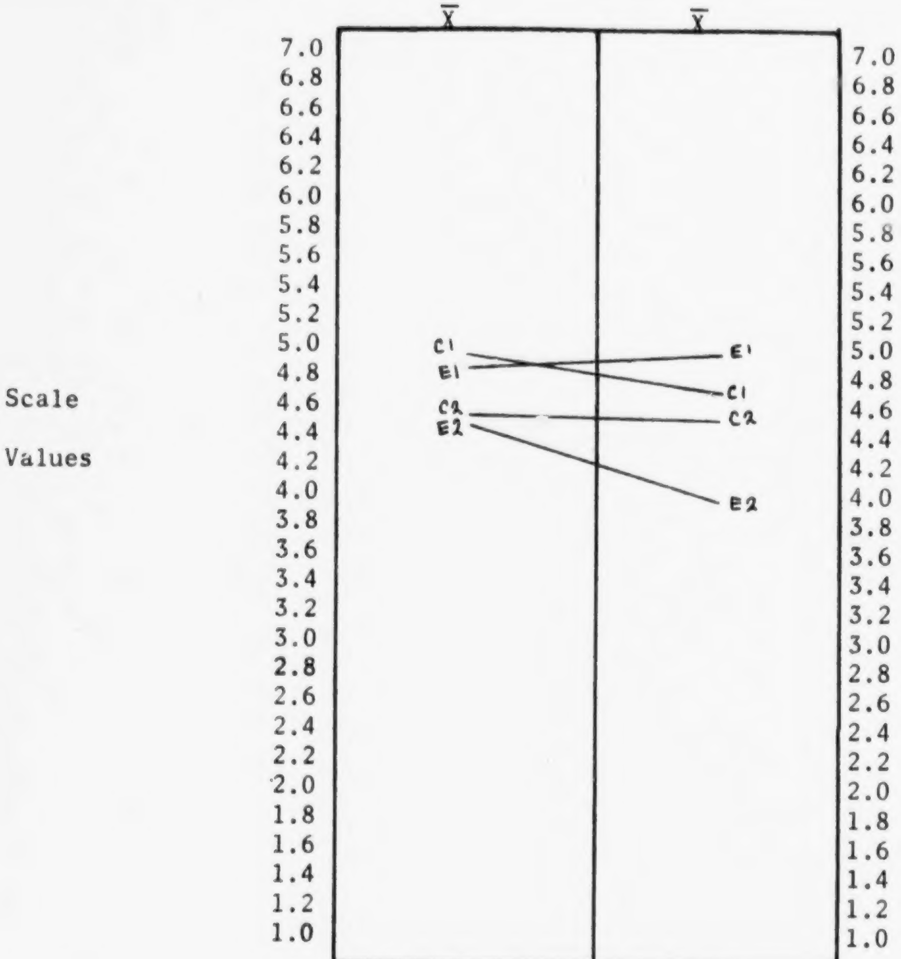


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	38	4.737	1.996	72	5.764	1.379	68	5.544	1.539	40	5.850	1.122
Experimental SED #2	60	4.367	2.099	52	4.423	1.649	45	4.488	1.700	39	4.230	1.856
Total	98			124			113			79		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experimental SED#1	Col.	4.938	.05	0.170	NS	0.010	NS	2.638	NS
W/Experimental SED#2	Row	12.315	.001	35.172	.001	32.943	.001	12.818	.001

QUESTIONNAIRE DATA

Item 5 My manager understands planning theory and is able to put it into practice.

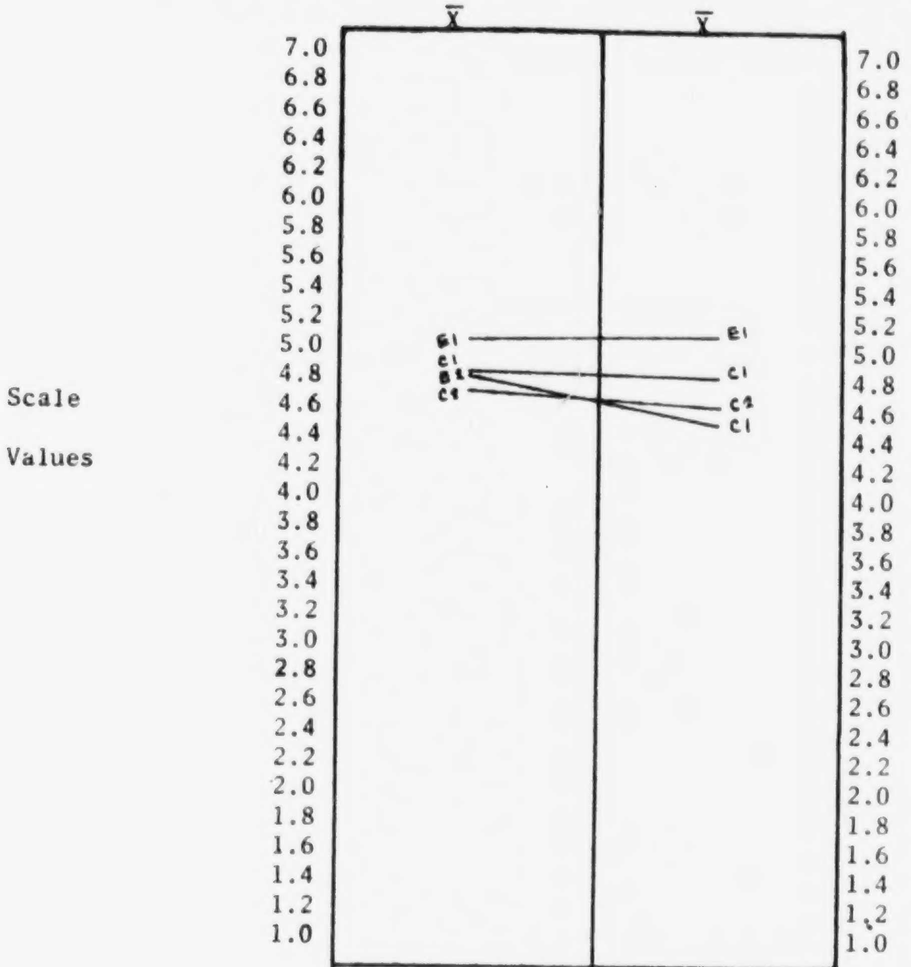


	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	4.897	1.702	39	5.025	1.404
Experimental SED#2	45	4.511	1.604	40	4.025	1.576
Control SED#1	67	4.940	1.486	61	4.721	1.343
Control SED#2	61	4.590	1.792	66	4.530	1.303
Total	241			206		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1 W/Control SED#1	Col.	0.050	NS
	Row	0.419	NS
Experiment SED#2 W/Control SED#1	Col.	2.849	NS
	Row	7.260	.01
Experiment SED#1 W/Control SED#2	Col.	0.026	NS
	Row	3.596	NS
Experiment SED#2 W/Control SED#2	Col.	1.533	NS
	Row	1.756	NS

QUESTIONNAIRE DATA

Item 6 I believe my organization gives me adequate training to do my work effectively.

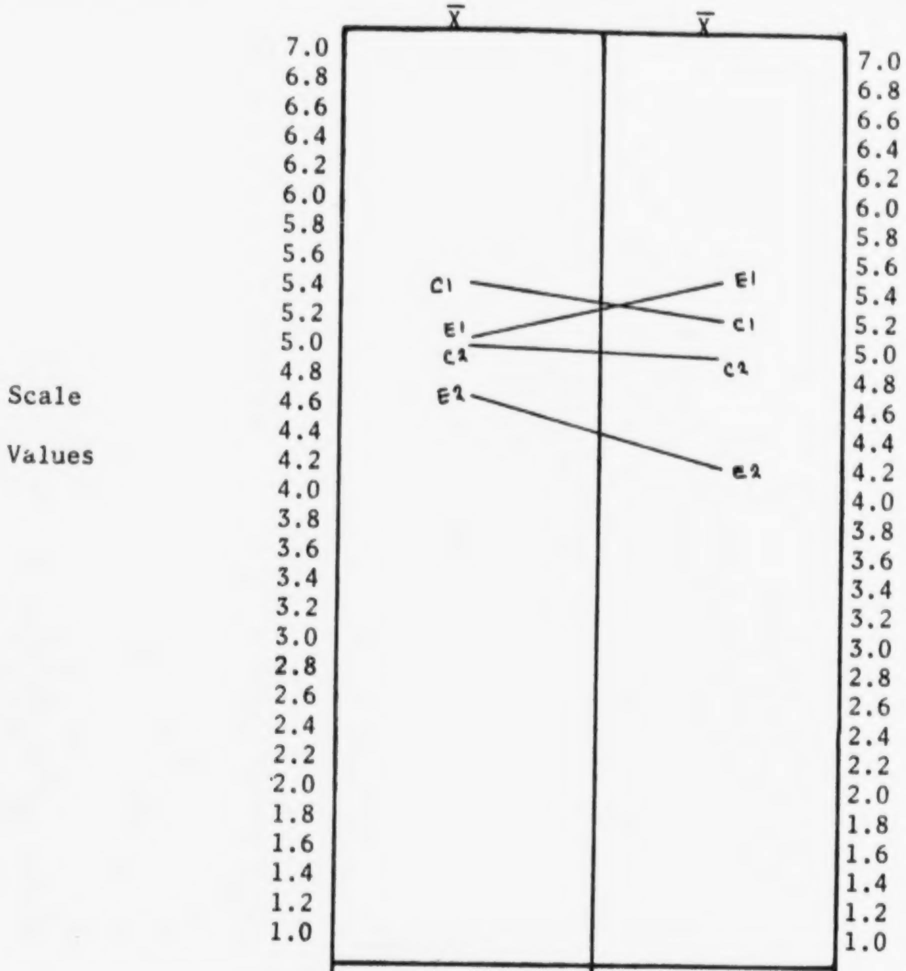


	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.102	1.556	40	5.125	1.264
Experimental SED#2	45	4.844	1.429	40	4.550	1.395
Control SED#1	67	4.880	1.571	61	4.852	1.424
Control SED#2	61	4.754	1.608	66	4.651	1.341
Total	241			207		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1	Col.	0.000	NS
W/Control SED#1	Row	1.570	NS
Experiment SED#2	Col.	0.614	NS
W/Control SED#1	Row	0.677	NS
Experiment SED#1	Col.	0.042	NS
W/Control SED#2	Row	4.411	.05
Experiment SED#2	Col.	0.950	NS
W/Control SED#2	Row	0.000	NS

QUESTIONNAIRE DATA

Item 7 I feel good about my manager's ability to plan.

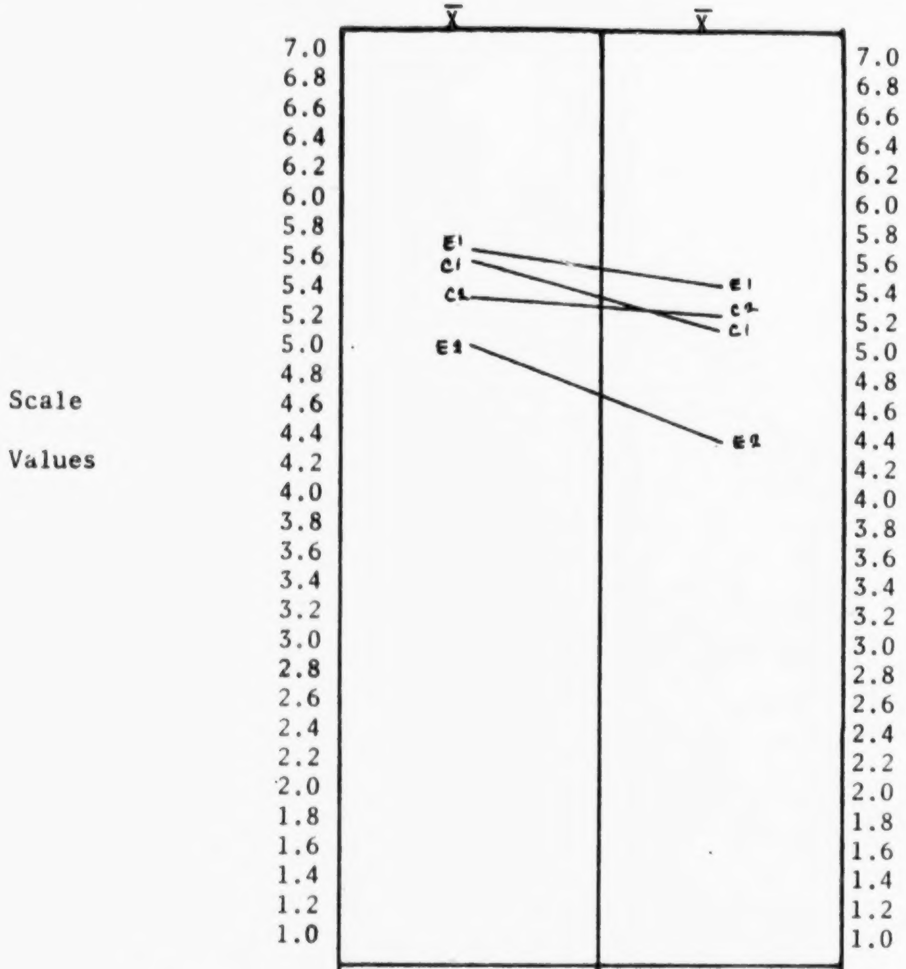


	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.161	1.653	40	5.525	1.131
Experimental SED#2	45	4.733	1.586	39	4.230	1.580
Control SED#1	67	5.447	1.222	61	5.245	1.337
Control SED#2	61	5.131	1.617	66	5.090	1.249
Total	241			206		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1 W/Control SED#1	Col.	0.193	NS
	Row	0.000	NS
Experiment SED#2 W/Control SED#1	Col.	3.166	NS
	Row	19.091	.001
Experiment SED#1 W/Control SED#2	Col.	0.688	NS
	Row	1.424	NS
Experiment SED#2 W/Control SED#2	Col.	1.654	NS
	Row	8.887	.01

QUESTIONNAIRE DATA

Item 8 My manager provides me with adequate support to perform my job.



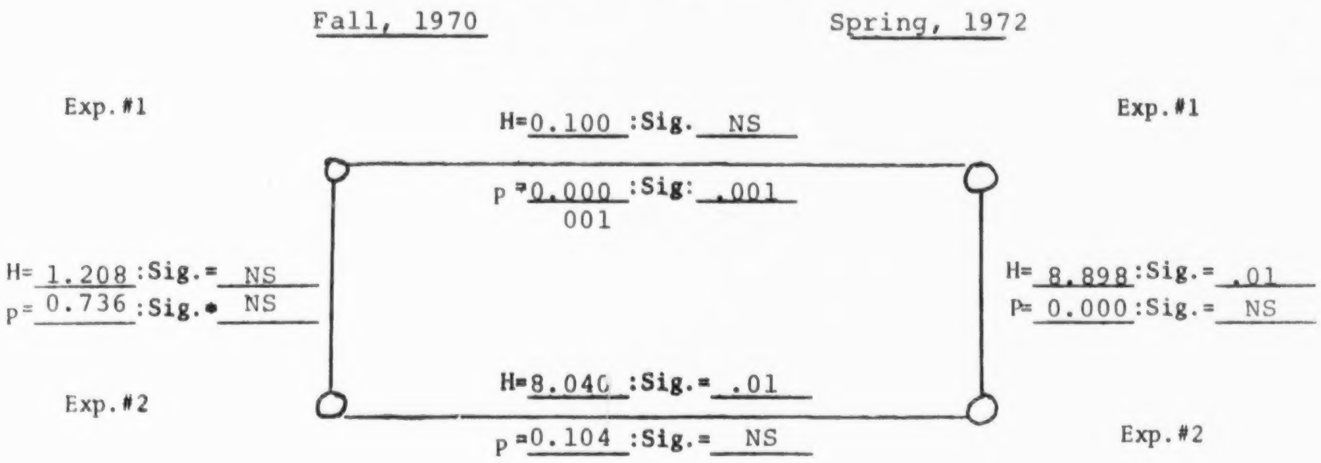
	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental SED#1	68	5.691	1.187	40	5.475	1.240
Experimental SED#2	45	5.044	1.364	39	4.410	1.584
Control SED#1	67	5.641	1.214	60	5.183	1.455
Control SED#2	61	5.557	1.565	66	5.257	1.180
Total	241			205		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1	Col.	3.912	.05
W/Control SED#1	Row	0.999	NS
Experiment SED#2	Col.	7.781	.01
W/Control SED#1	Row	12.240	.001
Experiment SED#1	Col.	2.201	NS
W/Control SED#2	Row	1.019	NS
Experiment SED#2	Col.	5.479	.05
W/Control SED#2	Row	11.621	.001

CONTENT ANALYSIS DATA

Item 1 : Establish credibility of Planning.

SCHEMATIC PRESENTATION OF ANALYSIS

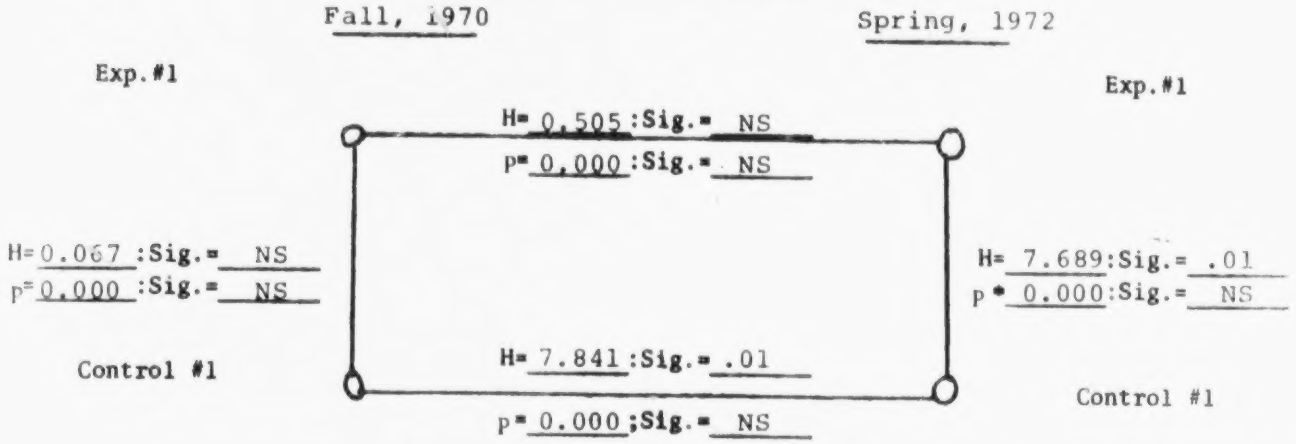

Fall, 1970
Spring, 1972
Exp.#1
H=0.100 :Sig. NS
Exp.#1
p =0.000 :Sig: .001
001
H= 1.208 :Sig.= NS
p= 0.736 :Sig.= NS
H= 8.898 :Sig.= .01
P= 0.000 :Sig.= NS
Exp.#2
H=8.040 :Sig.= .01
Exp.#2
p =0.104 :Sig.= NS

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	7 8	H= 1.208 Sig.= NS	P = 0.736 Sig. NS
Spring, 1972			
Experiment #1 & Experiment #2	9 8	H= 8.898 Sig.=.01	p = 0.000 Sig.= NS
Fall, 1970-Spring, 1972			
Experiment #1 & Experiment #1	7 9	H=0.100 Sig.= NS	p = 0.000001 Sig.= .001
Experiment #2 & xperiment #2	8 8	H=8.040 Sig.= .01	p = 0.104 Sig.= NS

CONTENT ANALYSIS DATA

Item 2 : Role of Planning - How integral.

SCHEMATIC PRESENTATION OF ANALYSIS



Fall, 1970

Spring, 1972

Exp.#1

H= 0.505 :Sig.= NS
p= 0.000 :Sig.= NS

Exp.#1

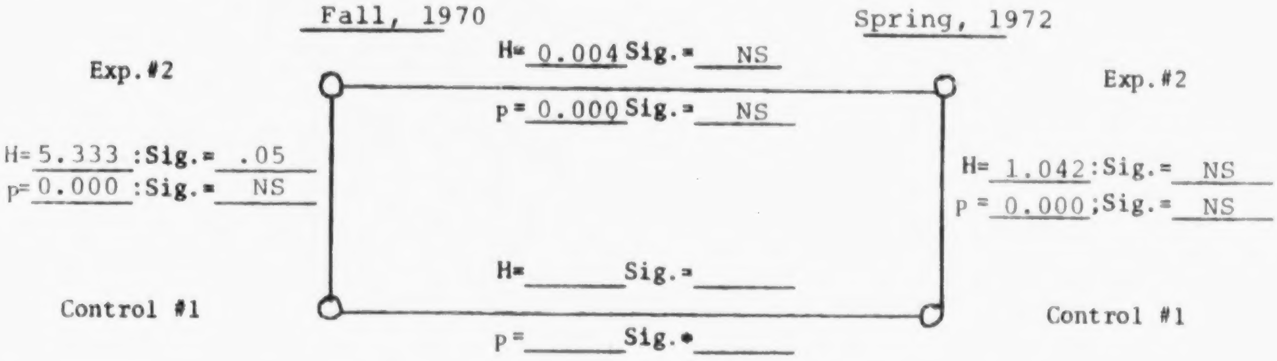
H=0.067 :Sig.= NS
p=0.000 :Sig.= NS

H= 7.689:Sig.= .01
p= 0.000:Sig.= NS

Control #1

H= 7.841 :Sig.= .01
p= 0.000 ;Sig.= NS

Control #1



Fall, 1970

Spring, 1972

H= 0.004 Sig.= NS

Exp.#2

p= 0.000 Sig.= NS

Exp.#2

H=5.333 :Sig.= .05
p=0.000 :Sig.= NS

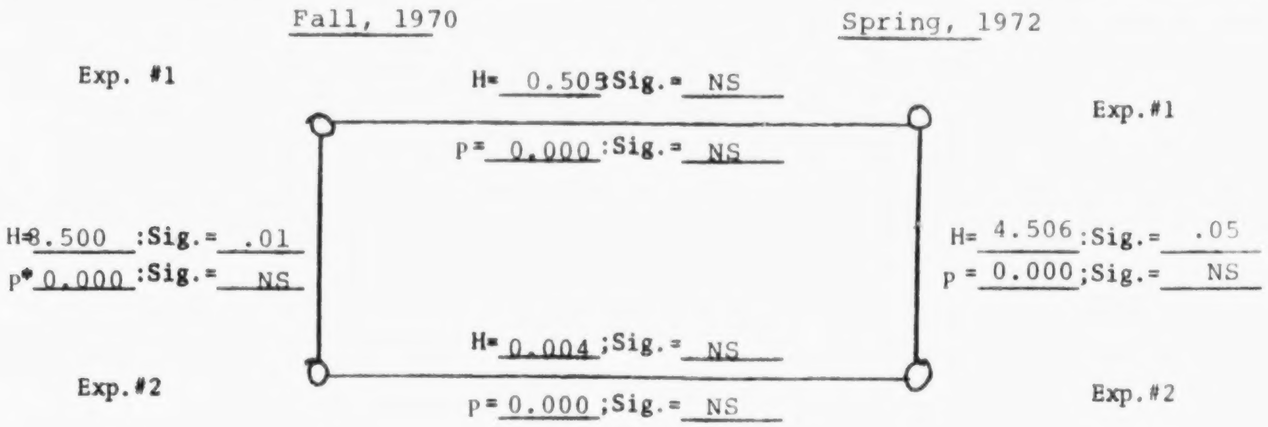
H= 1.042:Sig.= NS
p = 0.000;Sig.= NS

H=______ Sig.=______

Control #1

Control #1

p=______ Sig.=______



Fall, 1970

Spring, 1972

Exp. #1

H= 0.505 :Sig.= NS

Exp.#1

p= 0.000 :Sig.= NS

H=8.500 :Sig.= .01
p= 0.000 :Sig.= NS

H= 4.506 :Sig.= .05
p = 0.000;Sig.= NS

H= 0.004 ;Sig.= NS

Exp.#2

p= 0.000 ;Sig.= NS

Exp.#2

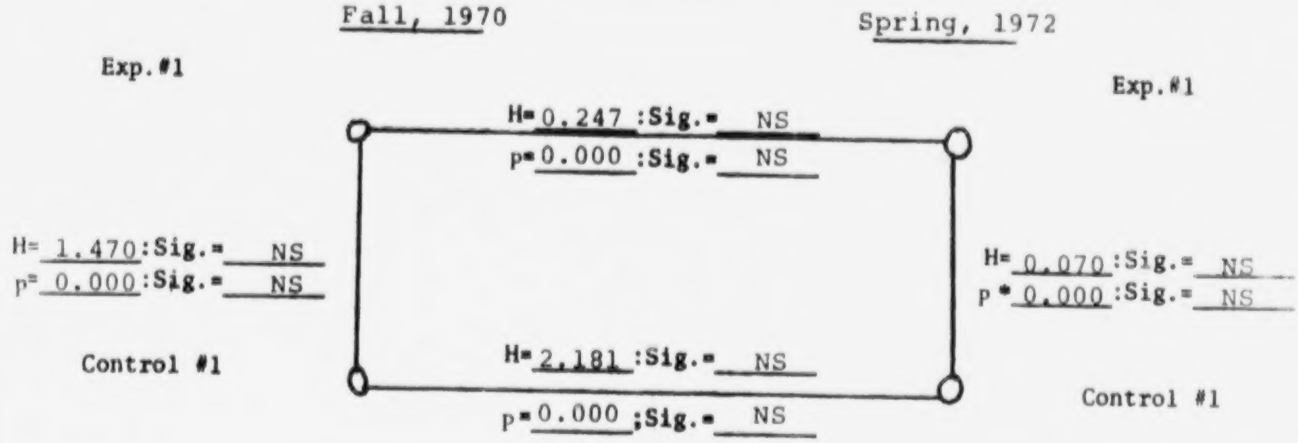
Item 2 : Role of Planning - How integral.

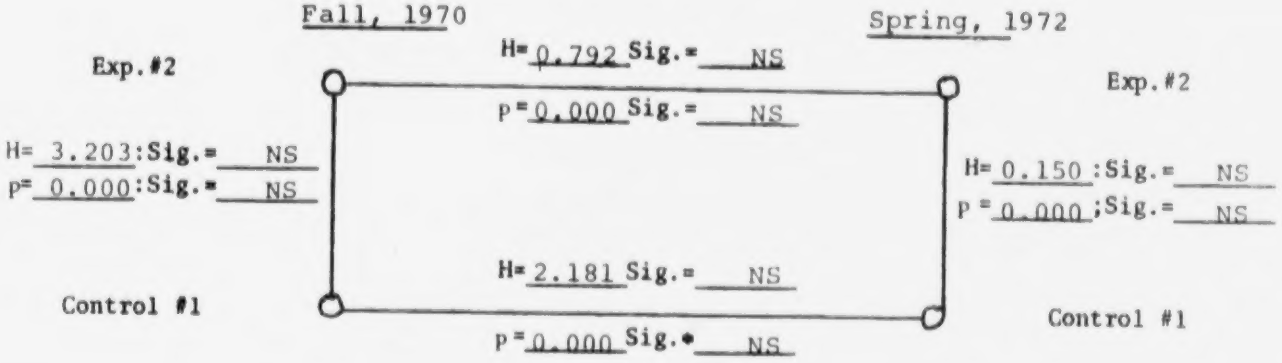
Fall, 1970	N	**Kruskal-Wallis One-Way Analysis of Variance**	**Binominal Test of Proportions**
Experiment#1 & **Control #1**	12 12	H= 0.067 **Signif.=** NS	P = 0.000 **Signif.=** NS
Experiment#2 & Control #1	12 12	H= 5.333 **Signif.=** .05	p = 0.000 **Signif.=** NS
Experiment#1 & **Experiment#2**	12 12	H= 8.500 **Signif.=** .01	p=0.000 **Signif.=** NS
Spring, 1972			
Experiment#1 & **Control #1**	9 11	H= 7.689 **Signif.=** .01	P = 0.000 **Signif.=** NS
Experiment#2 & Control #1	10 11	H= 1.042 **Signif.=** NS	P = 0.000 **Signif.=** NS
Experiment#1 & **Experiment#2**	9 10	H= 4.506 **Signif.=** .05	P= 0.000 **Signif.=** NS
Fall, 1970- Spring, 1972			
Experiment #1 & **Experiment #1**	12 9	H= 0.505 **Signif.=** NS	p= 0.000 **Signif.=** NS
Experiment #2 & **Experiment #2**	12 10	H= 0.004 **Signif.=** NS	p= 0.000 **Signif=** NS
Control#1 & **Control#1**	12 11	H= 7.841 **Signif.=** .01	p = 0.000 **Signif.=** NS

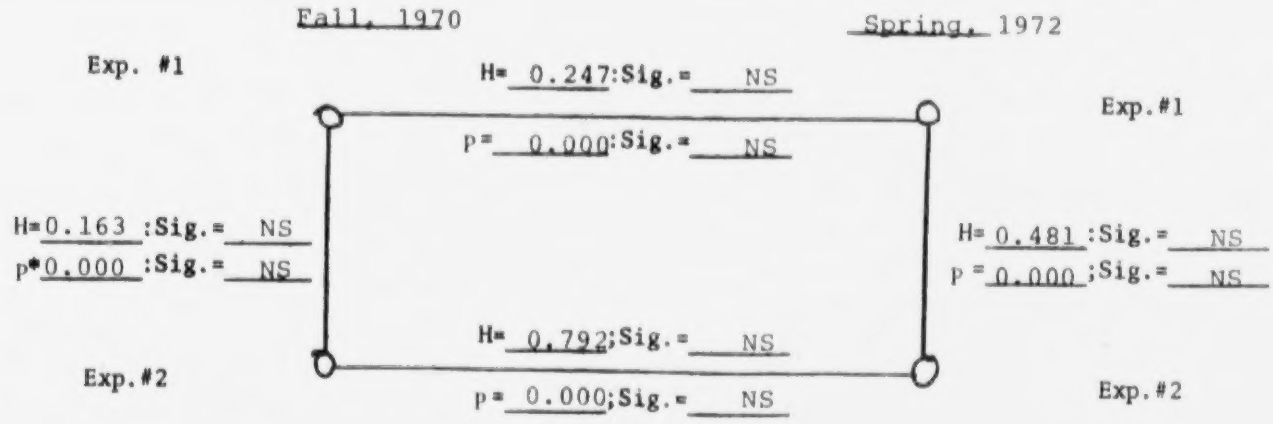
CONTENT ANALYSIS DATA

Item 3 : Role of Planning - How much is needed.

SCHEMATIC PRESENTATION OF ANALYSIS


Fall, 1970
Spring, 1972
Exp.#1
Exp.#1
H= 0.247 :Sig.= NS
p= 0.000 :Sig.= NS
H= 1.470:Sig.= NS
p= 0.000:Sig.= NS
H= 0.070:Sig.= NS
p = 0.000:Sig.= NS
Control #1
H= 2.181 :Sig.= NS
p= 0.000 ;Sig.= NS
Control #1


Fall, 1970
Spring, 1972
Exp.#2
H= 0.792 Sig.= NS
P = 0.000 Sig.= NS
Exp.#2
H= 3.203:Sig.= NS
p= 0.000:Sig.= NS
H= 0.150 :Sig.= NS
P = 0.000 ;Sig.= NS
H= 2.181 Sig.= NS
Control #1
P = 0.000 Sig.= NS
Control #1


Fall, 1970
Spring, 1972
Exp. #1
H= 0.247:Sig.= NS
Exp.#1
P = 0.000:Sig.= NS
H=0.163 :Sig.= NS
p= 0.000 :Sig.= NS
H= 0.481 :Sig.= NS
P = 0.000 ;Sig.= NS
H= 0.792;Sig.= NS
Exp.#2
p = 0.000;Sig.= NS
Exp.#2

Item 3 : Role of Planning - How much is needed.

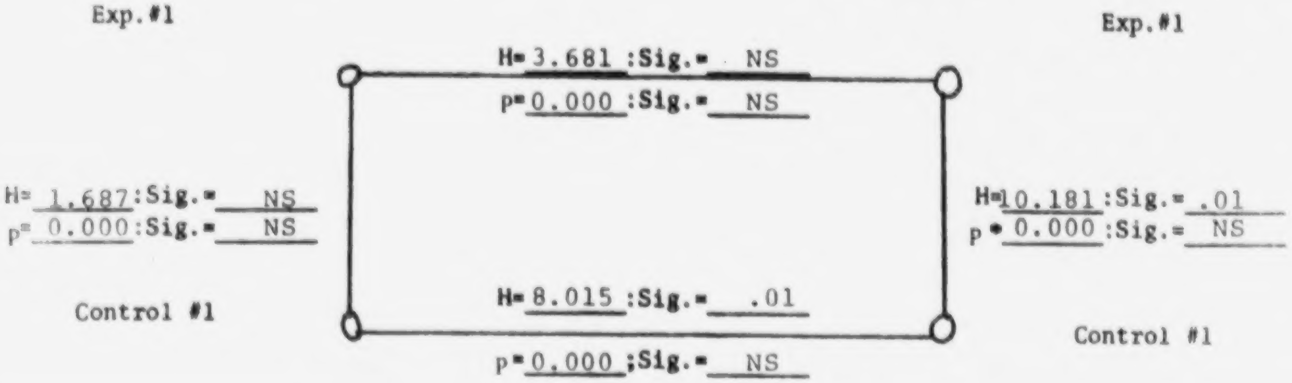
Fall, 1970	N	**Kruskal-Wallis One-Way Analysis of Variance**	**Binominal Test of Proportions**
Experiment#1 **&** **Control #1**	12 12	**H=** 1.470 **Signif.=** NS	P = 0.000 **Signif.=** NS
Experiment#2 **&** **Control #1**	12 12	**H=** 3.203 **Signif.=** NS	P = 0.000 **Signif.=** NS
Experiment#1 **&** **Experiment#2**	12 12	**H=** 0.163 **Signif.=** NS	P= 0.000 **Signif.=** NS
Spring, 1972			
Experiment#1 **&** **Control #1**	9 11	**H=** 0.070 **Signif.=** NS	P= 0.000 **Signif.=** NS
Experiment#2 **&** **Control #1**	10 11	**H=** 0.150 **Signif.=** NS	P= 0.000 **Signif.=** NS
Experiment#1 **&** **Experiment#2**	9 10	**H=** 0.481 **Signif.=** NS	P= 0.000 **Signif.=** NS
Fall, 1970- Spring, 1972			
Experiment #1 **&** **Experiment #1**	12 9	**H=** 0.247 **Signif.=** NS	P= 0.000 **Signif.=** NS
Experiment #2 **&** **Experiment #2**	12 10	**H=** 0.792 **Signif.=** NS	P= 0.000 **Signif.=** NS
Control#1 **&** **Control#1**	12 11	**H=** 2.181 **Signif.=** NS	P = 0.000 **Signif.=** NS

CONTENT ANALYSIS DATA

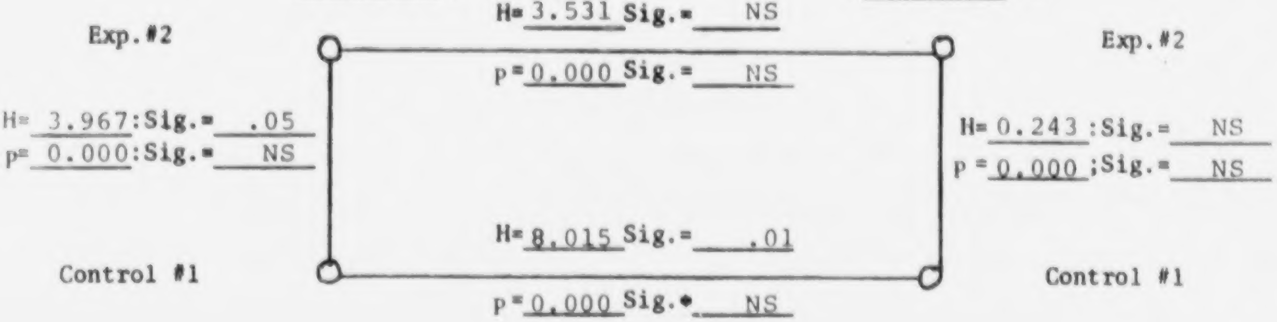
Item 4 : Role of Planning - emergence.

SCHEMATIC PRESENTATION OF ANALYSIS

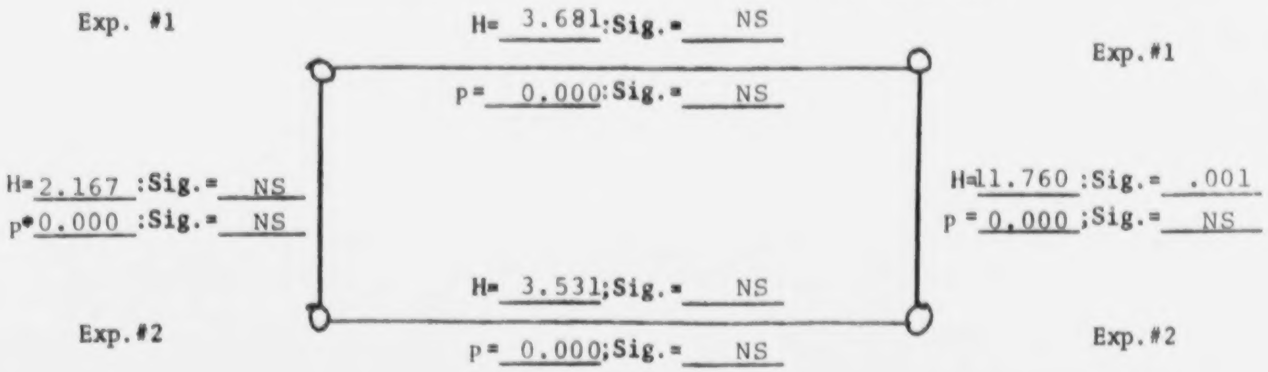
Fall, 1970 Spring, 1972


Exp.#1
Exp.#1
H= 3.681 :Sig.= NS
p= 0.000 :Sig.= NS
H= 1.687:Sig.= NS
p= 0.000:Sig.= NS
H= 10.181 :Sig.= .01
p = 0.000 :Sig.= NS
Control #1
H= 8.015 :Sig.= .01
p= 0.000 ;Sig.= NS
Control #1

Fall, 1970 Spring, 1972


Exp.#2
H= 3.531 Sig.= NS
p = 0.000 Sig.= NS
Exp.#2
H= 3.967:Sig.= .05
p= 0.000:Sig.= NS
H= 0.243 :Sig.= NS
p = 0.000 ;Sig.= NS
Control #1
H= 8.015 Sig.= .01
p = 0.000 Sig.= NS
Control #1

Fall, 1970 Spring, 1972

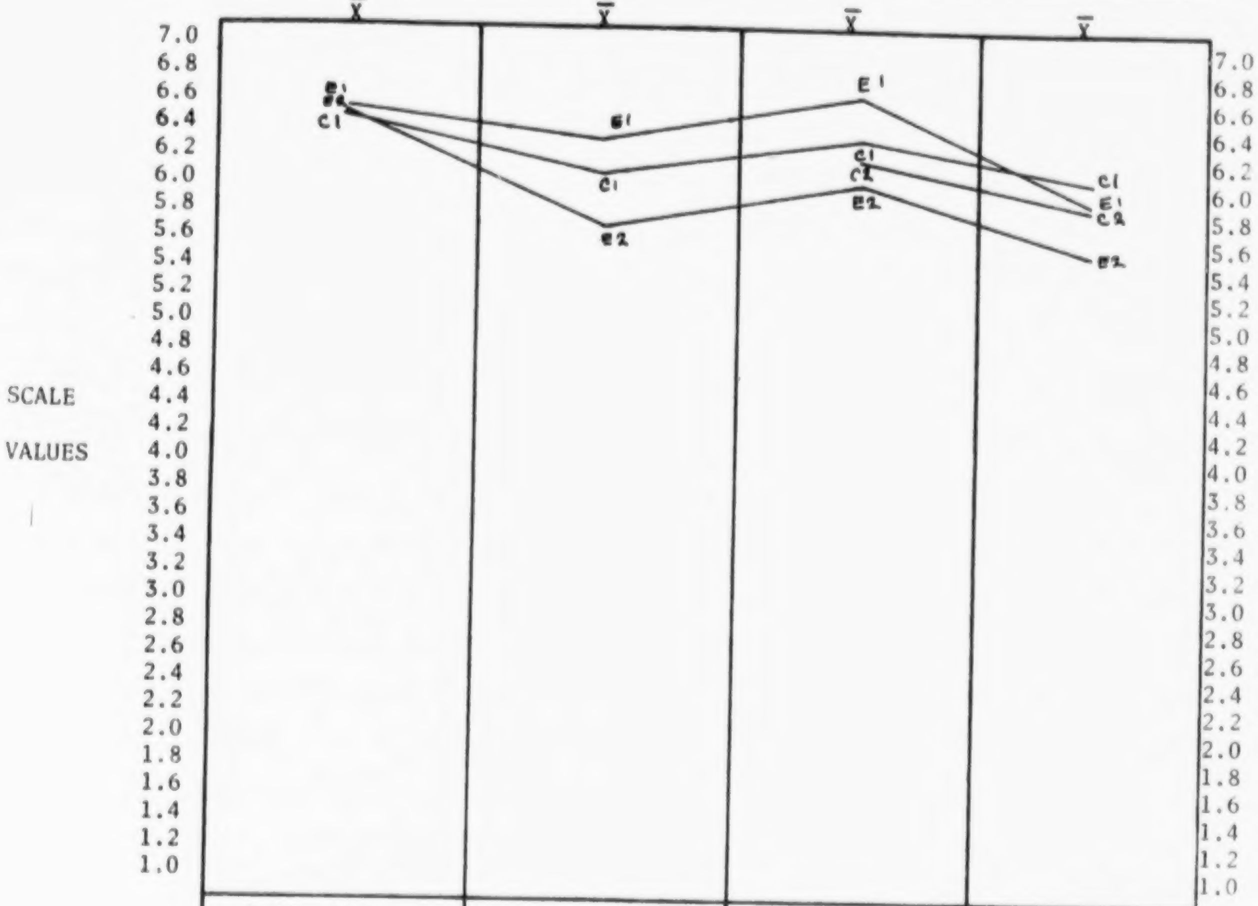

Exp. #1
H= 3.681:Sig.= NS
Exp.#1
p= 0.000:Sig.= NS
H= 2.167 :Sig.= NS
p= 0.000 :Sig.= NS
H= 11.760 :Sig.= .001
p = 0.000 ;Sig.= NS
H= 3.531;Sig.= NS
Exp.#2
p= 0.000;Sig.= NS
Exp.#2

Item 4 : Role of Planning - emergence.

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binominal Test of Proportions
Experiment#1	12	**H=** 1.687	P = 0.000
&			
Control #1	12	**Signif.=** NS	**Signif.=** NS
Experiment#2	12	**H=** 3.967	p = 0.000
&			
Control #1	12	**Signif.=** .05	**Signif.=** NS
Experiment#1	12	**H=** 2.167	p= 0.000
&			
Experiment#2	12	**Signif.=** NS	**Signif.=** NS
Spring, 1972			
Experiment#1	9	**H=** 10.181	P= 0.000
&			
Control #1	11	**Signif.=** .01	**Signif.=** NS
Experiment#2	10	**H=** 0.243	P= 0.000
&			
Control #1	11	**Signif.=** NS	**Signif.=** NS
Experiment#1	9	**H=** 11.760	P= 0.000
&			
Experiment#2	10	**Signif.=** .001	**Signif.=** NS
Fall, 1970- Spring, 1972			
Experiment #1	12	**H=** 3.681	p= 0.000
&			
Experiment #1	9	**Signif.=** NS	**Signif.=** NS
Experiment #2	12	**H=** 3.531	p= 0.000
&			
Experiment #2	10	**Signif.=** NS	**Signif=** NS
Control#1	12	**H=** 8.015	p = 0.000
&			
Control#1	11	**Signif.=** .01	**Signif.=** NS

QUESTIONNAIRE DATA

Item 5 As I see it, planning is an integral part of running the state's schools.

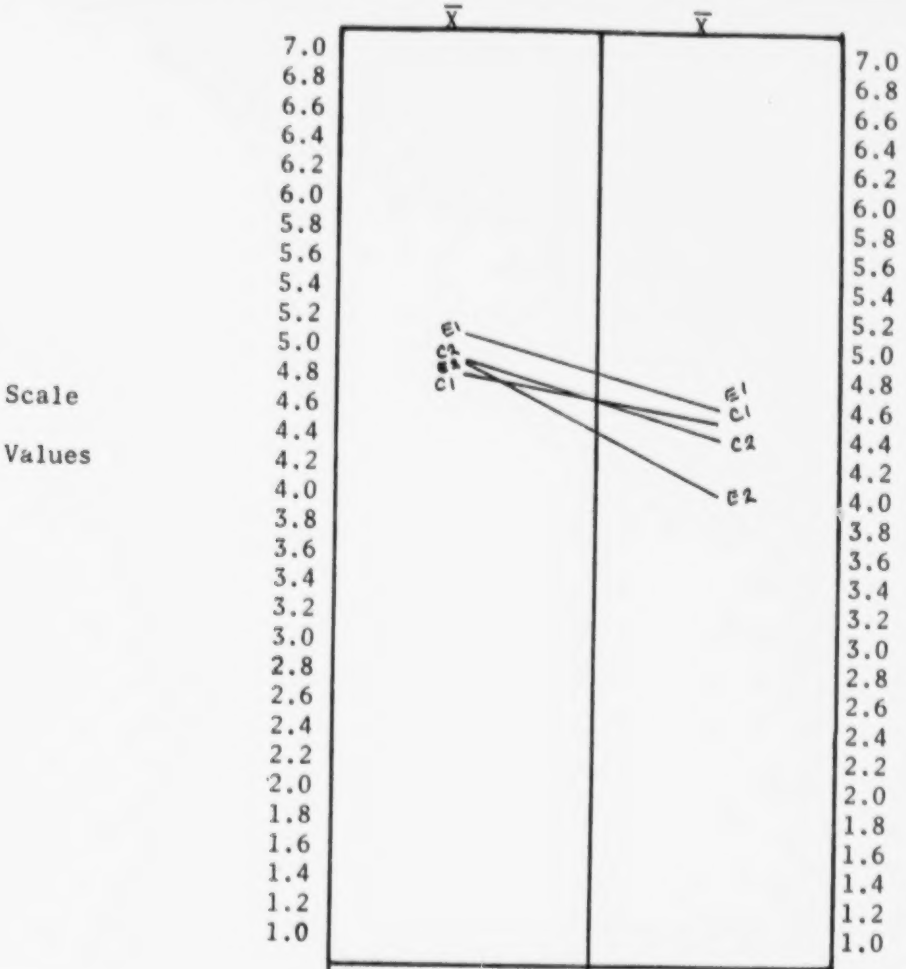


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED #1	39	6.564	0.718	73	6.342	0.961	68	6.691	0.652	40	5.925	1.185
Experimental SED #2	60	6.533	0.853	52	5.712	1.661	45	6.066	1.115	40	5.550	1.632
Control SED #1	66	6.500	0.662	61	6.131	1.310	67	6.402	0.759	61	6.098	1.059
Control SED #2								6.278	1.034	66	5.909	1.173
Total	165			186			241			207		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	1.156	NS	7.375	.01	19.835	.001	15.307	.001
	Row	5.315	.05	4.801	.05	0.228	NS	.147	NS
Experiment SED#2 W/ Control SED #1	Col.	1.650	NS	3.529	NS	6.793	.01	23.045	.001
	Row	15.679	.001	4.998	.05	7.882	.01	3.208	NS
Experiment SED#1 W/ Control SED #2	Col.					17.645	.001		
	Row					2.510	NS		
Experiment SED#2 W/ Control SED #2	Col.					6.639	.01		
	Row					2.756	NS		

QUESTIONNAIRE DATA

Item 6 As I see it, persons in this organization put a lot of effort into planning.

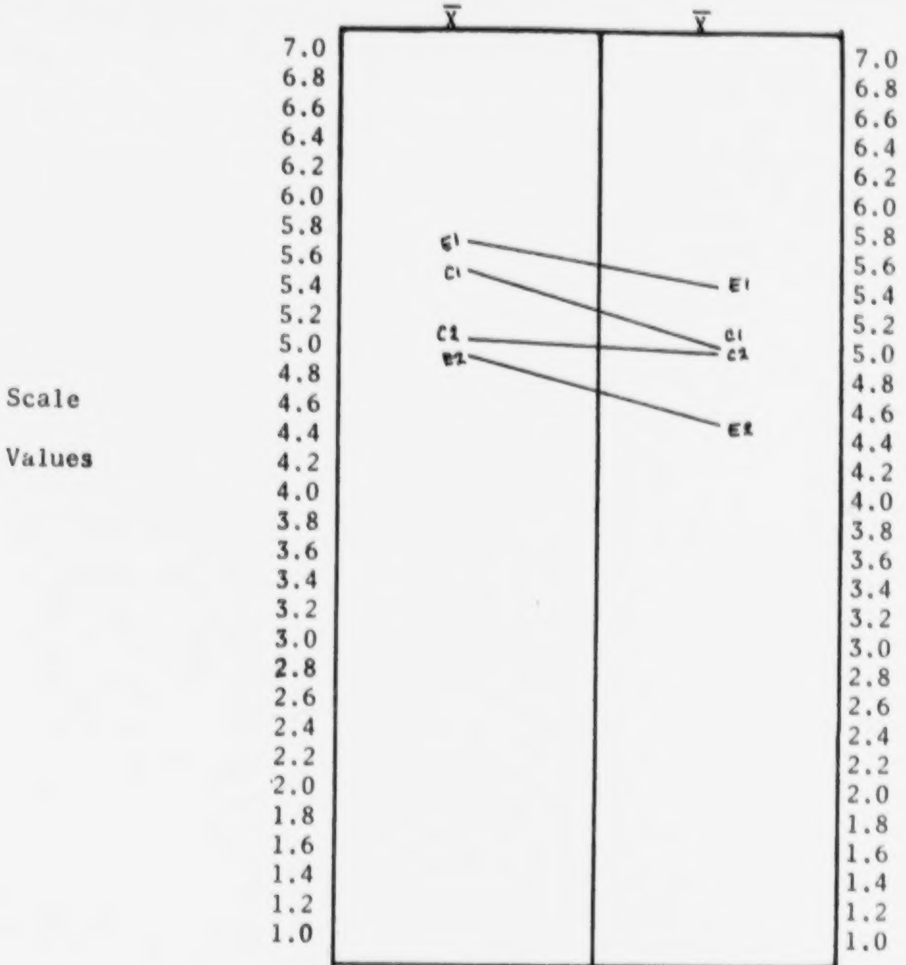


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental SED#1	68	5.147	1.260	40	4.625	1.212
Experimental SED#2	45	4.933	1.355	40	4.075	1.366
Control SED#1	67	4.880	1.409	60	4.550	1.281
Control SED#2	61	4.934	1.515	66	4.439	1.254
Total	241			206		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1 W/Control SED#1	Col.	6.012	.05
	Row	0.964	NS
Experiment SED#2 W/Control SED#1	Col.	9.779	.01
	Row	1.233	NS
Experiment SED#1 W/Control SED#2	Col.	8.303	.01
	Row	1.273	NS
Experiment SED#2 W/Control SED#2	Col.	12.289	.001
	Row	0.846	NS

QUESTIONNAIRE DATA

Item 7 My capability to plan effectively will positively affect my future career in this organization.

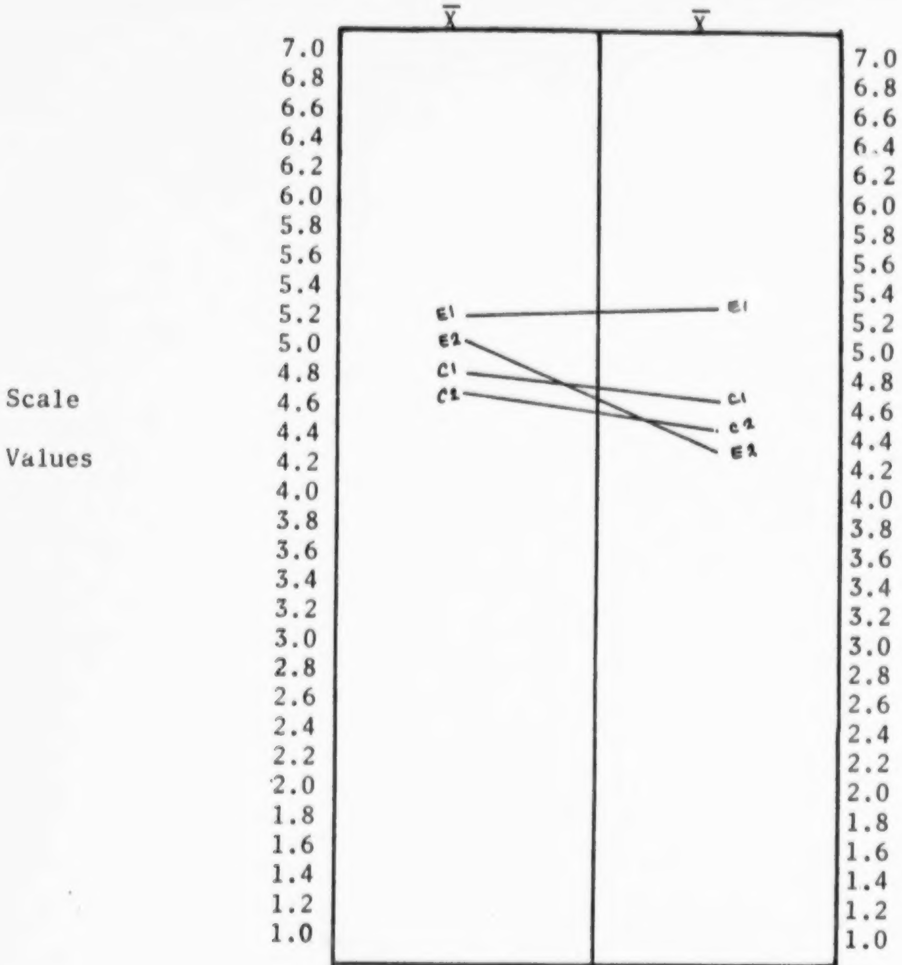


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental SED#1	68	5.764	1.350	39	5.461	1.096
Experimental SED#2	45	5.022	1.815	39	4.564	1.586
Control SED#1	67	5.555	1.317	61	5.032	1.505
Control SED#2	61	5.098	1.660	66	5.015	1.341
Total	241			205		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1	Col.	5.212	.05
W/Control SED#1	Row	3.167	NS
Experiment SED#2	Col.	5.112	.05
W/Control SED#1	Row	5.335	.05
Experiment SED#1	Col.	1.060	NS
W/Control SED#2	Row	8.796	.01
Experiment SED#2	Col.	1.460	NS
W/Control SED#2	Row	1.385	NS

QUESTIONNAIRE DATA

Item 8 The activities relating to planning are having an effect on the policy of this organization.

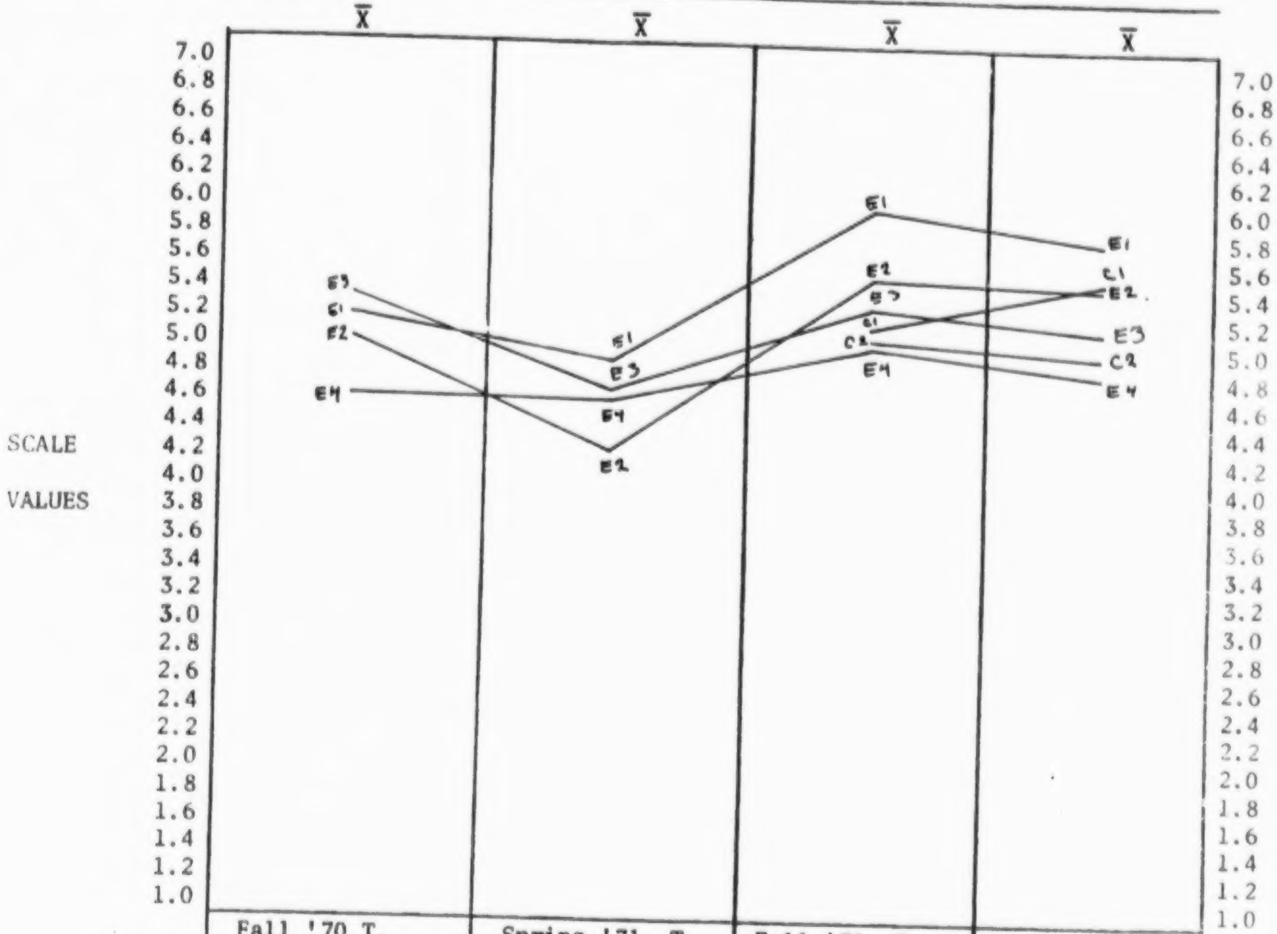


	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.250	1.713	40	5.325	1.141
Experimental SED#2	45	5.088	1.411	40	4.350	1.424
Control SED#1	67	4.850	1.416	59	4.694	1.392
Control SED#2	61	4.737	1.504	64	4.484	1.297
Total	241			203		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1	Col.	0.042	NS
W/Control SED#1	Row	6.912	.01
Experiment SED#2	Col.	5.087	.05
W/Control SED#1	Row	0.0724	NS
Experiment SED#1	Col.	0.207	NS
W/Control SED#2	Row	11.943	.001
Experiment SED#2	Col.	6.264	.05
W/Control SED#2	Row	0.299	NS

QUESTIONNAIRE DATA

Item 1 : The Goals of the Organization are articulated.

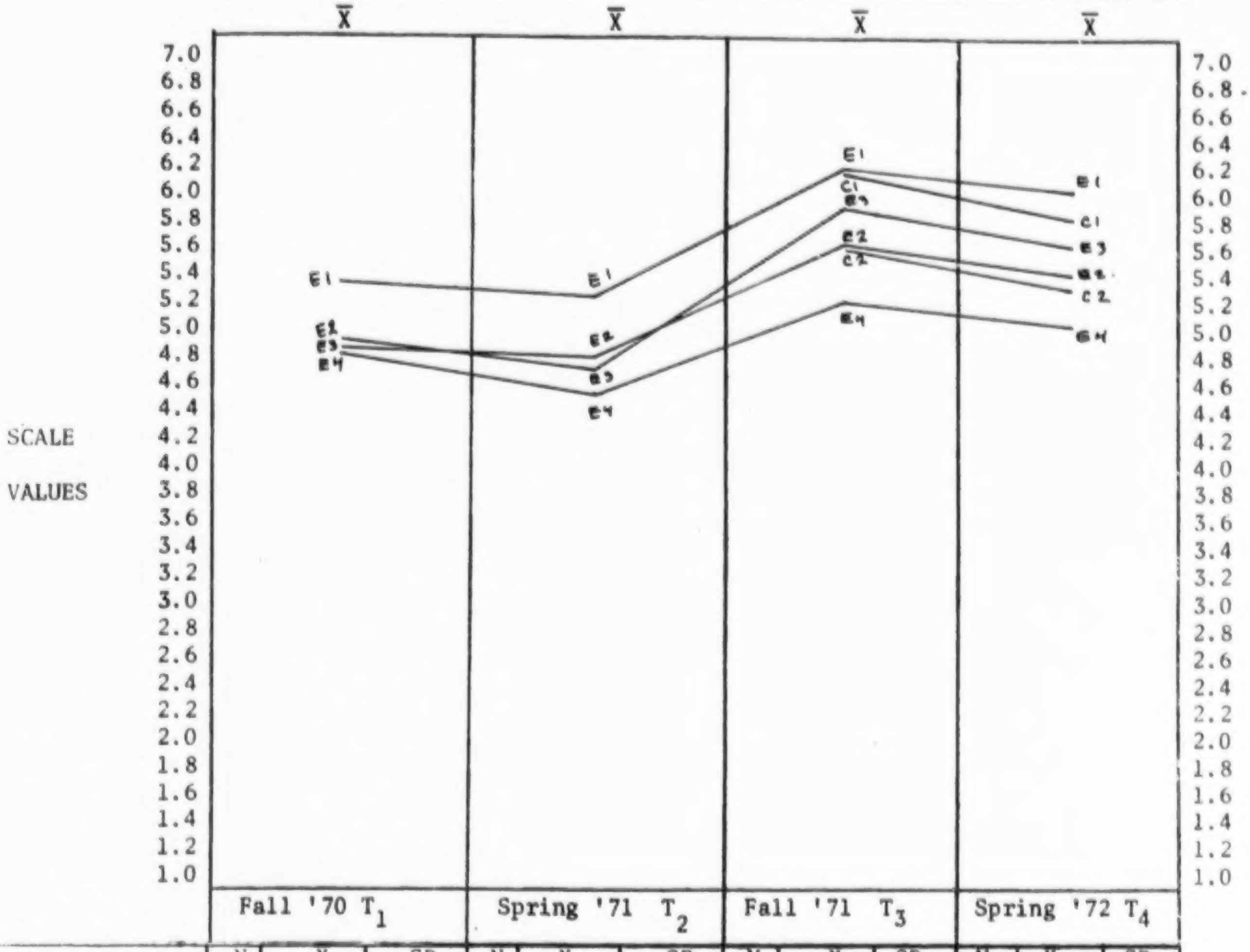


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment LEA #1	28	5.250	1.174	25	4.920	1.552	32	6.031	0.932	31	5.806	1.077
Experiment LEA #2	38	5.105	1.180	26	4.269	1.313	31	5.548	1.233	32	5.437	0.948
Experiment LEA #3	33	5.363	1.112	17	4.705	0.985	24	5.333	0.816	23	5.173	1.072
Experiment LEA #4	27	4.666	1.330	23	4.652	1.721	29	5.034	1.426	27	4.851	1.610
Control LEA #1							30	5.166	1.391	20	5.450	0.944
Control LEA #2							36	5.083	1.401	33	5.000	1.322
Total	127			91			185			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/ Experiment LEA#2	Col.	5.762	.05	5.919	.05	0.799	NS	5.189	.05
	Row	2.681	NS	1.847	NS	5.148	.05	1.733	NS
Experiment LEA#3 W/ Experiment LEA#4	Col.	1.537	NS	3.322	NS	0.448	NS	0.000	NS
	Row	1.916	NS	0.405	NS	1.476	NS	4.174	.05
Experiment LEA#1 W/ Control LEA #1	Col.					0.018	NS		
	Row					8.202	.01		
Experiment LEA#2 W/ Control LEA #1	Col.					0.150	NS		
	Row					0.689	NS		
Experiment LEA#3 W/ Control LEA #2	Col.					0.278	NS		
	Row					0.849	NS		
Experiment LEA#4 W/ Control LEA #2	Col.					0.265	NS		
	Row					0.145	NS		

QUESTIONNAIRE DATA

Item 2 : Our goals are realistic and attainable with our best efforts.

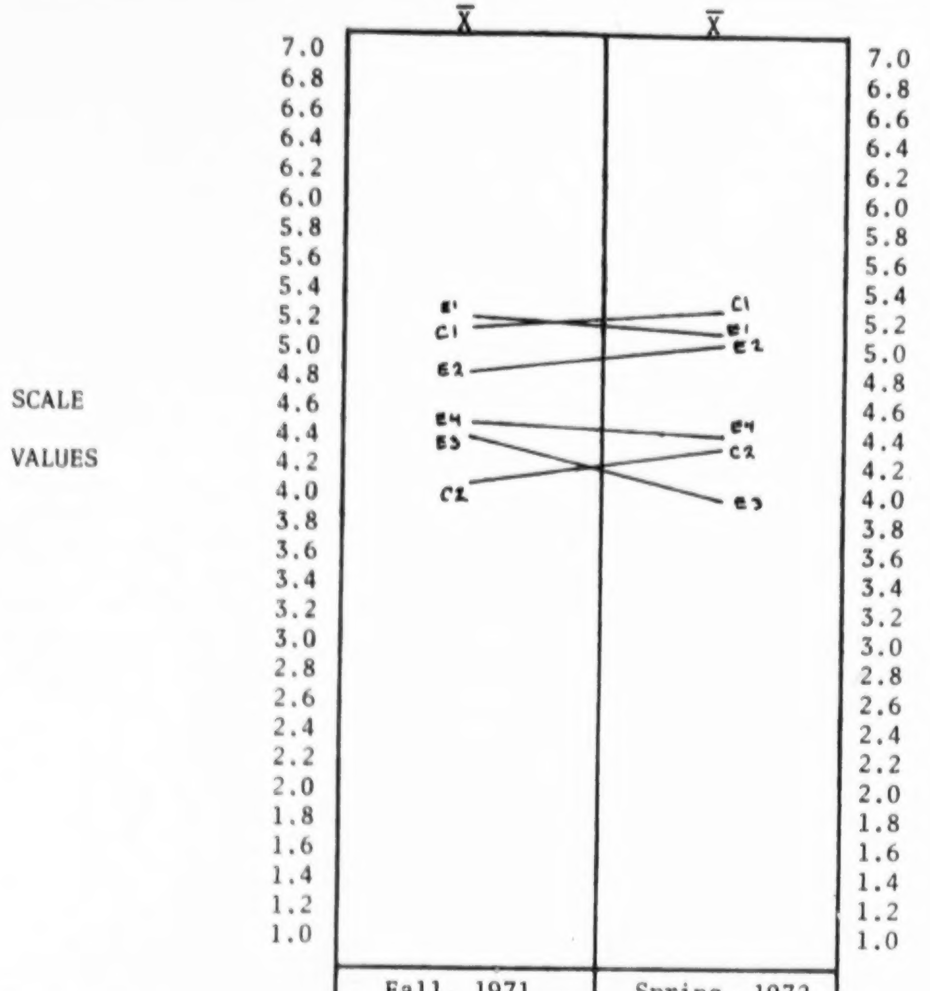


	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment LEA #1	28	5.392	0.831	38	5.289	1.183	32	6.218	0.750	31	6.032	0.795
Experiment LEA #2	25	4.920	1.605	26	4.769	1.242	31	5.935	0.928	32	5.625	1.099
Experiment LEA #3	33	4.878	1.386	17	4.823	1.333	24	5.666	0.816	23	5.434	0.992
Experiment LEA #4	26	4.846	1.317	23	4.565	2.128	29	5.241	1.745	27	5.074	1.567
Control LEA #1							30	6.200	1.761	20	5.850	0.988
Control LEA #2							36	5.638	1.198	33	5.333	1.020
Total	112			104			182			166		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	4.640	.05	32.740	.001	2.376	NS	7.454	.01
Experiment LEA#2	Row	0.303	NS	1.015	NS	4.588	.05	2.044	NS
Experiment LEA#3 W/	Col.	0.269	NS	5.032	.05	0.540	NS	2.270	NS
Experiment LEA#4	Row	0.201	NS	1.018	NS	2.097	NS	0.571	NS
Experiment LEA#1 W/	Col.					2.976	NS		
Control LEA #1	Row					0.417	NS		
Experiment LEA#2 W/	Col.					3.280	NS		
Control LEA #1	Row					1.801	NS		
Experiment LEA#3 W/	Col.					1.872	NS		
Control LEA #2	Row					0.108	NS		
Experiment LEA#4 W/	Col.					0.896	NS		
Control LEA #2	Row					1.729	NS		

QUESTIONNAIRE DATA

Item 3 The top priority objectives for state education are clear to me.

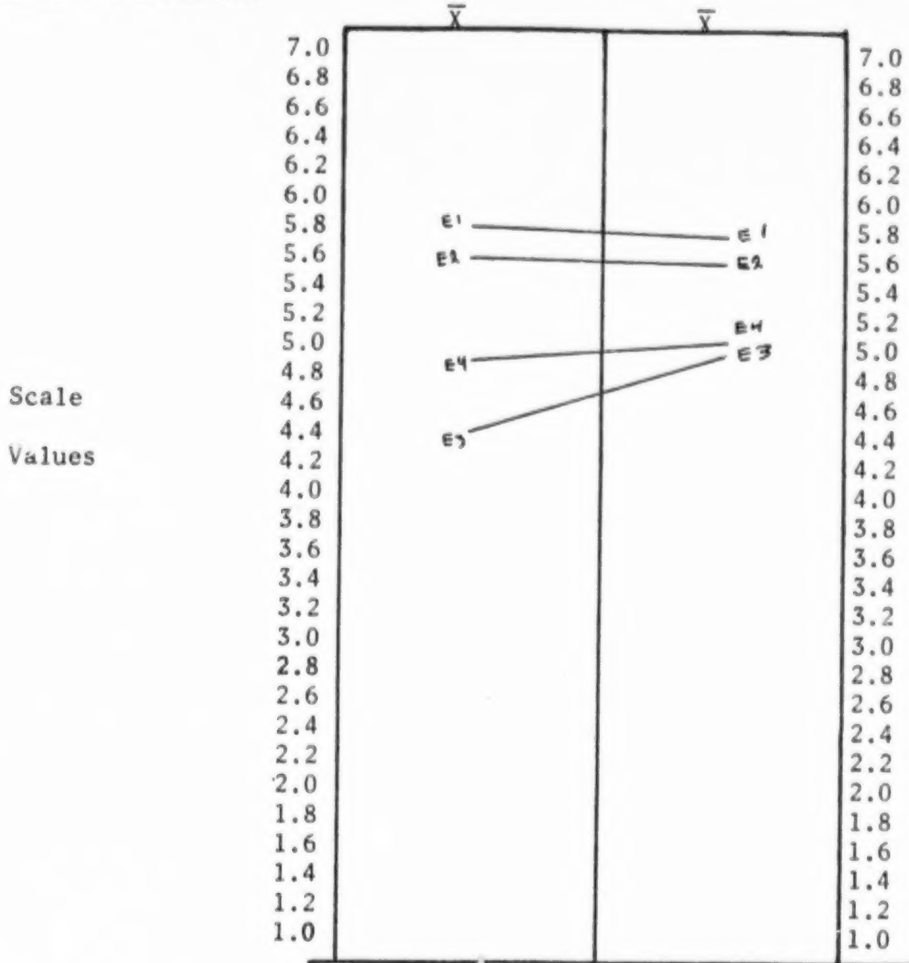


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental LEA #1	32	5.250	1.218	31	5.161	1.128
Experimental LEA #2	31	4.870	1.384	32	5.093	1.422
Experimental LEA #3	24	4.416	1.138	23	4.000	1.167
Experimental LEA #4	29	4.517	1.682	27	4.444	1.908
Control LEA #1	30	5.200	1.156	20	5.300	1.031
Control LEA #2	36	4.111	1.389	33	4.363	1.318
Total	182			166		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1	Col.	0.084	NS
W/Experiment LEA#2	Row	0.937	NS
Experiment LEA#3	Col.	0.647	NS
W/Experiment LEA#4	Row	0.803	NS
Experiment LEA#1	Col.	0.000	NS
W/Control LEA#1	Row	0.040	NS
Experiment LEA#2	Col.	0.431	NS
W/Control LEA#1	Row	1.186	NS
Experiment LEA#3	Col.	0.115	NS
W/Control LEA#2	Row	0.014	NS
Experiment LEA#4	Col.	0.101	NS
W/Control LEA#2	Row	0.745	NS

QUESTIONNAIRE DATA

Item 4 I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education.

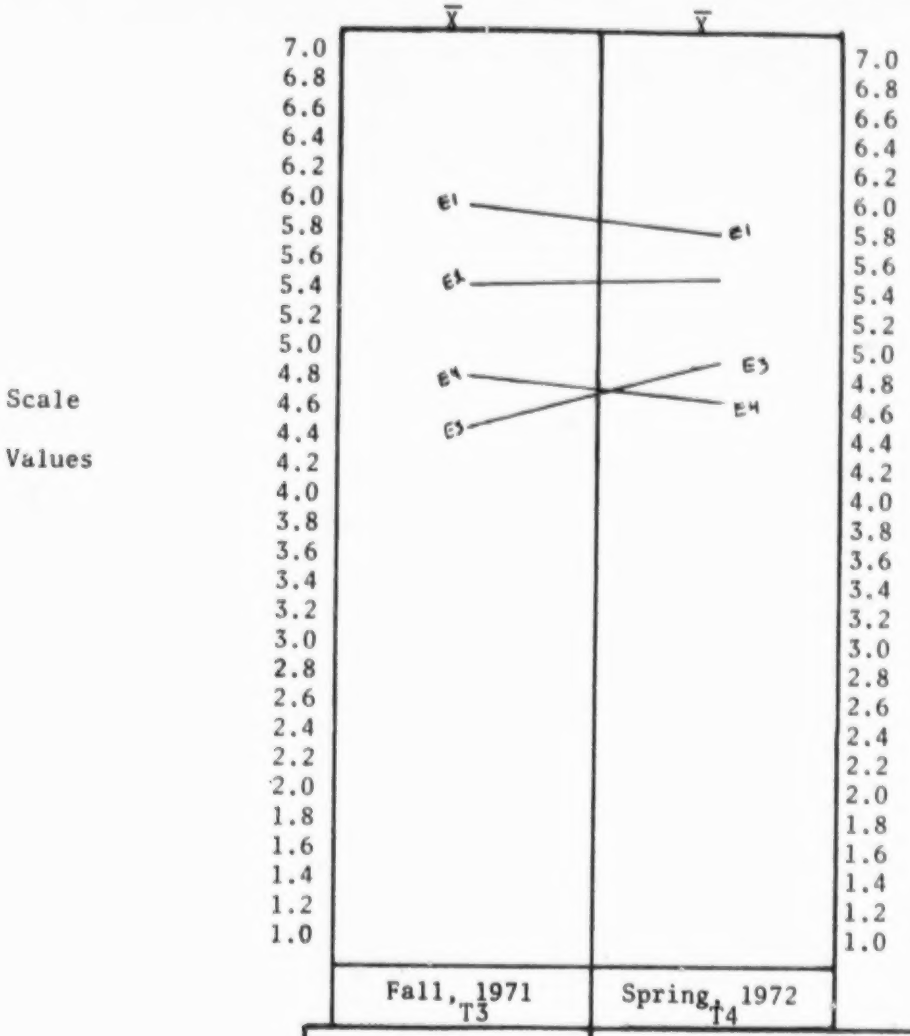


	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	5.843	0.919	31	5.806	1.077
Experimental LEA #2	31	5.612	1.406	32	5.593	1.240
Experimental LEA #3	24	4.458	1.744	21	5.000	1.483
Experimental LEA #4	29	4.931	1.579	26	5.076	1.622
Total	116			111		

Two-Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1 W/	Col.	0.018	NS
Experimental LEA#2	Row	1.123	NS
Experimental LEA#3 W/	Col.	1.120	NS
Experimental LEA#4	Row	0.715	NS

QUESTIONNAIRE DATA

Item 5 As I see it, the operational priorities of the objectives developed during AMA training are clear.

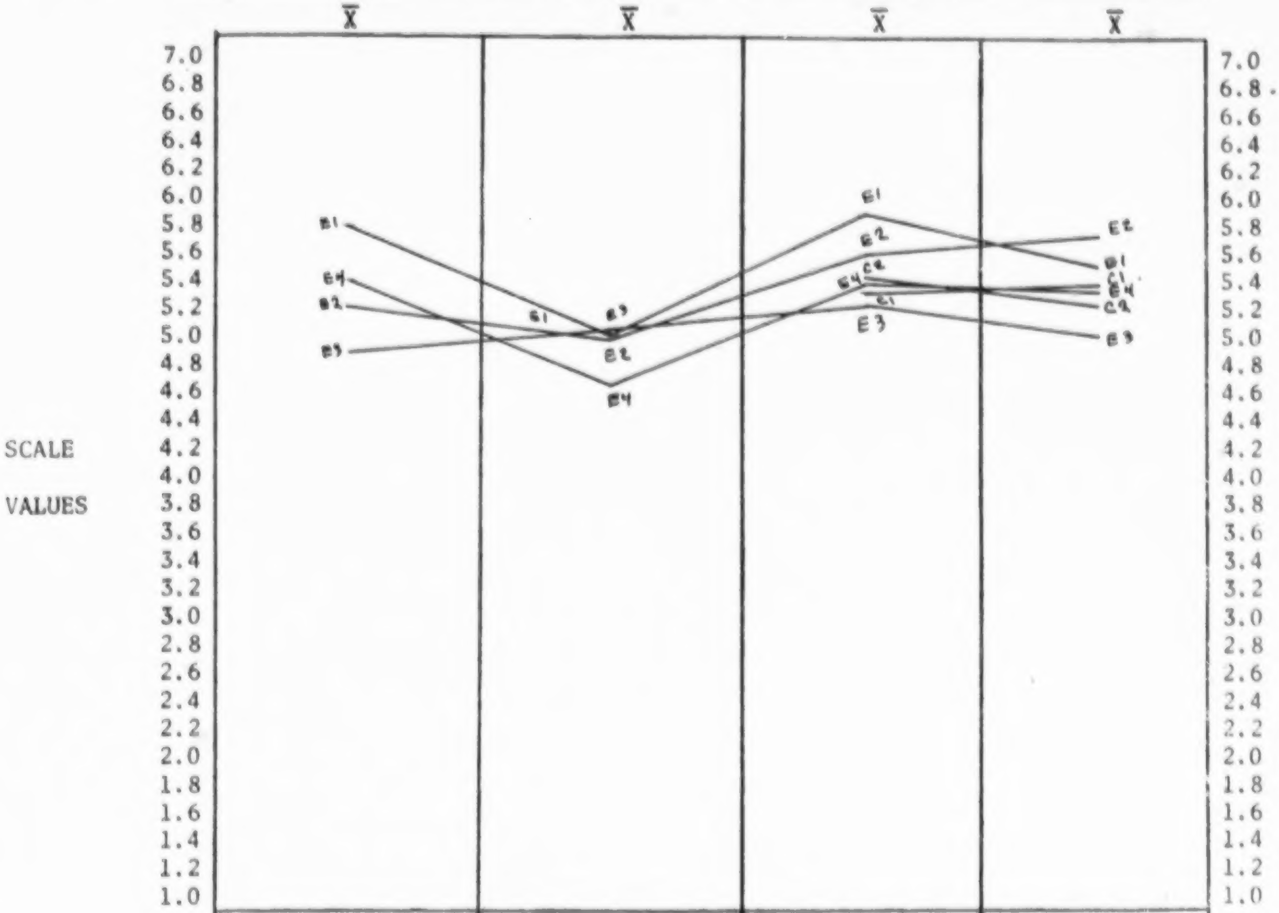


	Fall, 1971 T3			Spring, 1972 T4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experimental LEA #1	32	6.000	0.879	31	5.838	1.067
Experimental LEA #2	31	5.483	1.338	32	5.531	1.319
Experimental LEA #3	24	4.500	1.793	21	4.952	1.283
Experimental LEA #4	29	4.827	1.554	26	4.692	1.691
Total	116			111		

Two-Way Analysis of Variance	T_3 & T_4		
		F	Signif.
Experimental LEA#1 W/ Experimental LEA#2	Col.	0.075	NS
	Row	3.927	.05
Experimental LEA#3 W/ Experimental LEA#4	Col.	0.241	NS
	Row	0.010	NS

QUESTIONNAIRE DATA

Item 6 : The kinds of things I am doing will make a long term contribution to education.

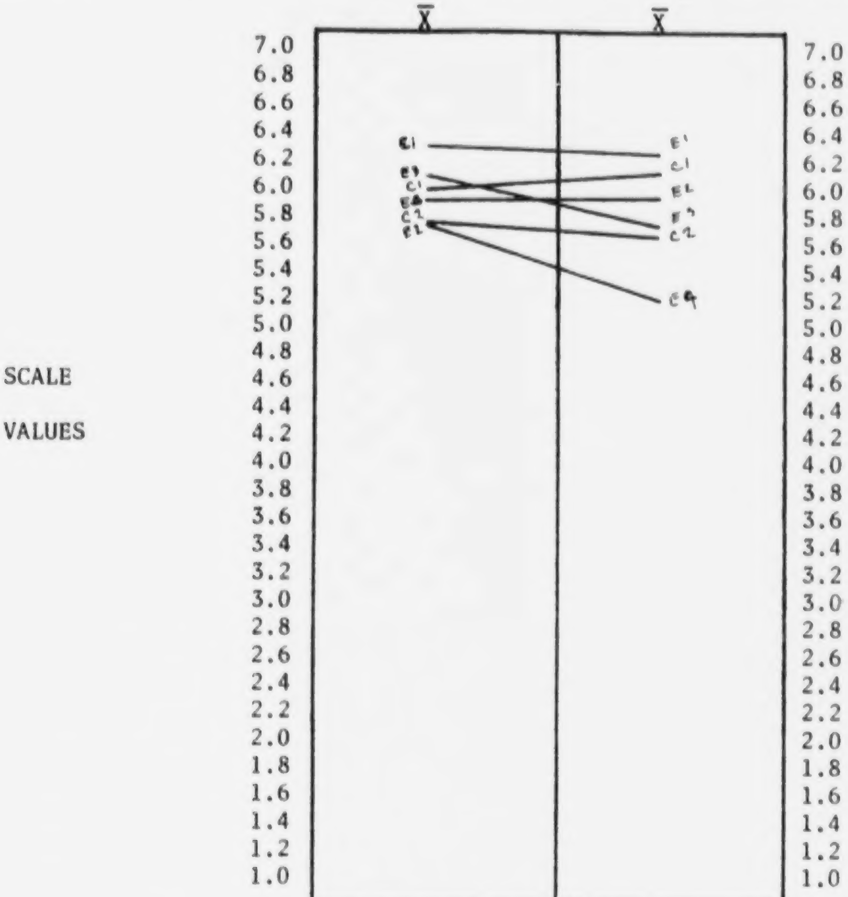


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment LEA #1	28	5.821	0.772	25	5.040	1.670	32	5.937	0.715	31	5.548	0.994
Experiment LEA #2	39	5.256	1.250	26	5.038	1.370	31	5.612	0.882	32	5.781	1.128
Experiment LEA #3	33	4.939	1.170	17	5.058	1.197	24	5.250	1.359	23	5.043	1.397
Experiment LEA #4	27	5.444	1.577	23	4.695	1.940	29	5.413	1.401	27	5.370	1.445
Control LEA #1							30	5.366	1.129	20	5.400	1.273
Control LEA #2							36	5.416	1.360	33	5.242	1.173
Total	127			91			185			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	4.298	.05	10.961	.001	0.431	NS	0.442	NS
Experiment LEA#2	Row	1.381	NS	0.538	NS	0.074	NS	0.769	NS
Experiment LEA#3 W/	Col.	1.045	NS	2.027	NS	0.202	NS	0.003	NS
Experiment LEA#4	Row	0.053	NS	0.097	NS	0.781	NS	2.411	NS
Experiment LEA#1 W/	Col.					0.829	NS		
Control LEA #1	Row					3.388	NS		
Experiment LEA#2 W/	Col.					0.231	NS		
Control LEA #1	Row					2.238	NS		
Experiment LEA#3 W/	Col.					0.583	NS		
Control LEA #2	Row					0.538	NS		
Experiment LEA#4 W/	Col.					0.202	NS		
Control LEA #2	Row					0.066	NS		

QUESTIONNAIRE DATA

Item 7 As I see it, my organization is moving in the right direction.

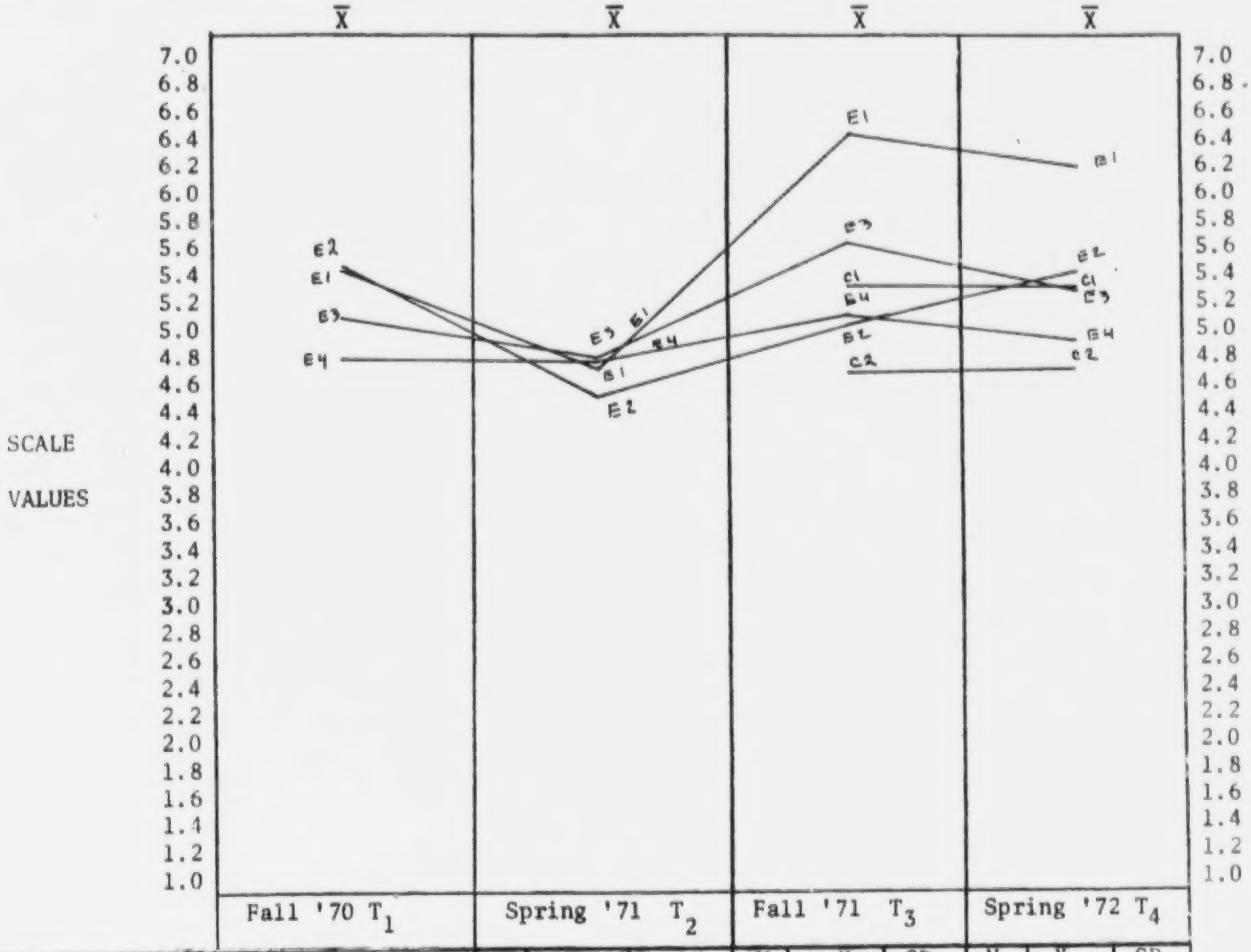


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental LEA #1	32	6.312	0.859	31	6.290	0.937
Experimental LEA #2	31	5.935	1.364	31	5.967	1.048
Experimental LEA #3	24	6.125	0.850	23	5.695	0.973
Experimental LEA #4	29	5.758	0.950	27	5.222	1.423
Control LEA #1	30	6.033	1.066	20	6.150	0.879
Control LEA #2	36	5.777	1.436	33	5.696	1.131
Total	185			167		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1 W/Experiment LEA#2	Col.	0.000	NS
	Row	3.349	NS
Experiment LEA#3 W/Experiment LEA#4	Col.	5.104	NS
	Row	3.859	NS
Experiment LEA#1 W/Control LEA#1	Col.	0.068	NS
	Row	1.349	NS
Experiment LEA#2 W/Control LEA#1	Col.	0.118	NS
	Row	0.420	NS
Experiment LEA#3 W/Control LEA#2	Col.	1.350	NS
	Row	0.620	NS
Experiment LEA#4 W/Control LEA#2	Col.	1.860	NS
	Row	1.191	NS

QUESTIONNAIRE DATA

Item 1 : My organization's policy statements are clear.

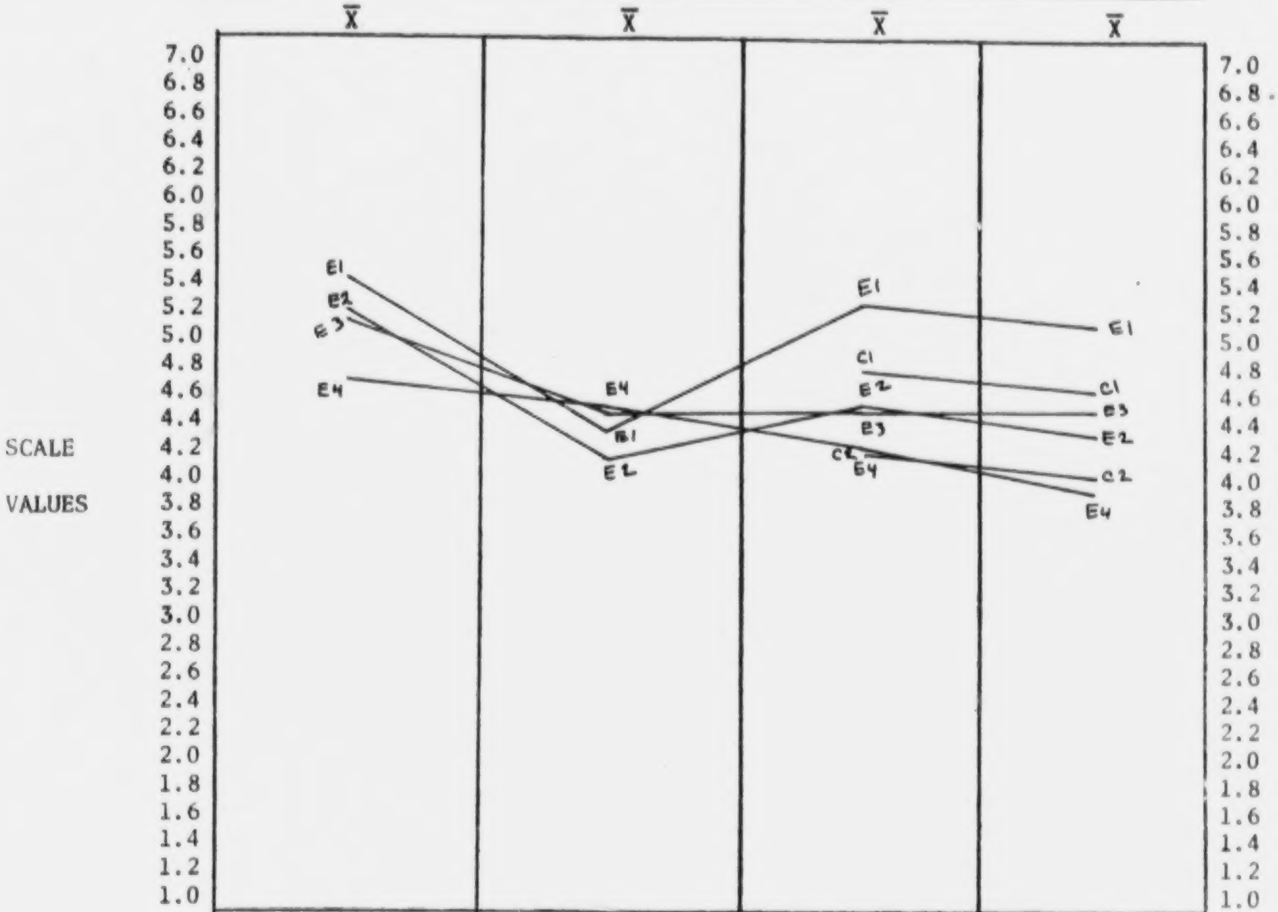


	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	5.464	1.104	25	4.760	1.738	32	6.437	0.840	31	6.225	0.668
Experiment LEA #2	39	5.487	1.393	26	4.538	1.580	31	5.064	1.504	32	5.437	1.242
Experiment LEA #3	33	5.121	1.340	17	4.823	1.467	24	5.666	0.868	23	5.304	0.926
Experiment LEA #4	27	4.814	1.442	23	4.782	1.782	29	5.137	0.990	27	4.851	1.511
Control LEA #1							30	5.366	1.351	20	5.350	1.182
Control LEA #2							36	4.722	1.523	33	4.757	1.369
Total	127			91			185			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	9.216	.01	16.738	.001	0.165	NS	3.043	NS
Experiment LEA#2	Row	0.133	NS	8.764	.01	29.705	.001	3.518	NS
Experiment LEA#3 W/	Col.	0.184	NS	4.802	.05	2.158	NS	0.183	NS
Experiment LEA#4	Row	0.316	NS	1.084	NS	4.944	.05	2.174	NS
Experiment LEA#1 W/	Col.					0.337	NS		
Control LEA #1	Row					24.499	.001		
Experiment LEA#2 W/	Col.					0.482	NS		
Control LEA #1	Row					0.175	NS		
Experiment LEA#3 W/	Col.					0.471	NS		
Control LEA #2	Row					9.797	.01		
Experiment LEA#4 W/	Col.					0.257	NS		
Control LEA #2	Row					1.064	NS		

QUESTIONNAIRE DATA

Item 2 : My organization's performance standards are understood.

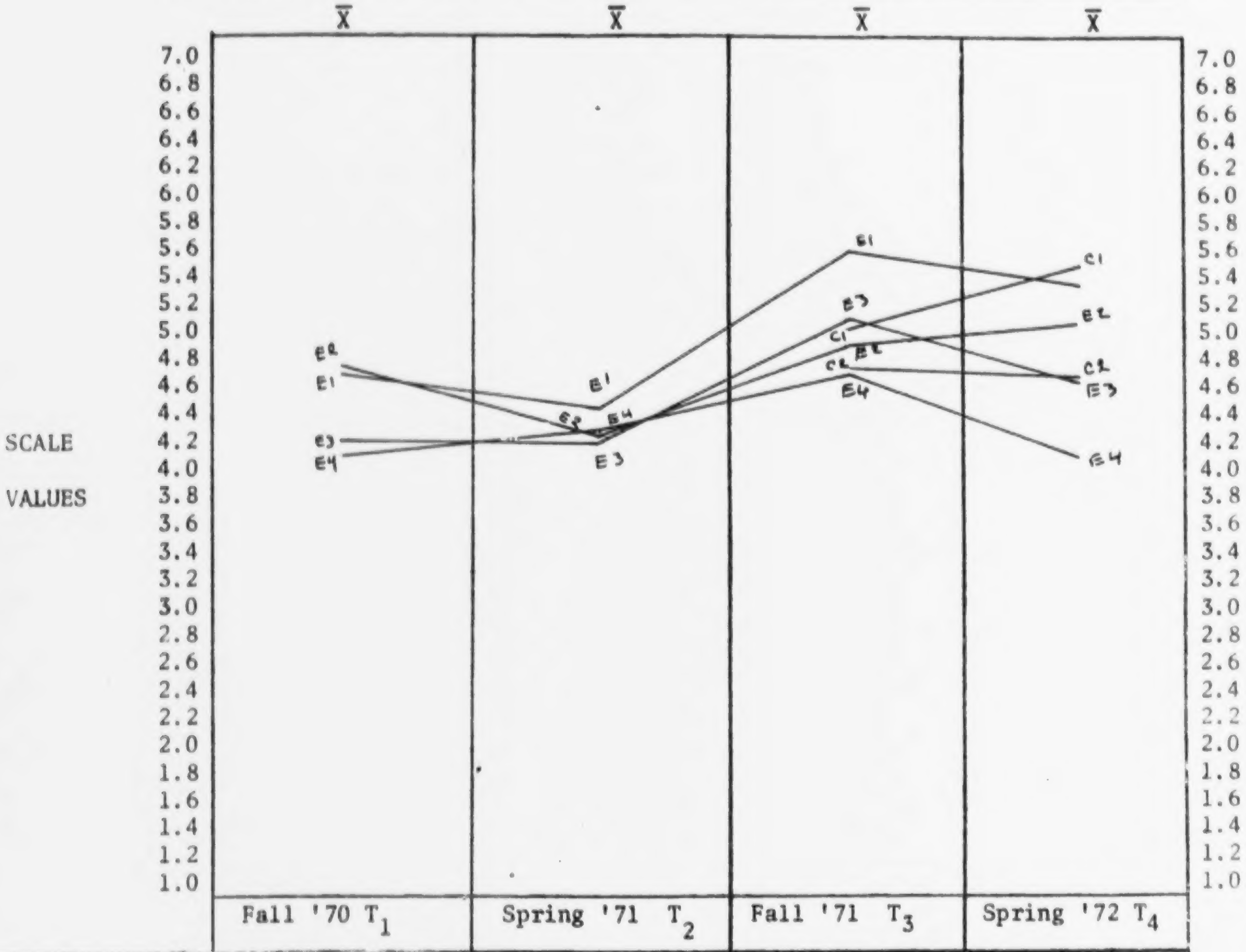


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	5.464	0.881	25	4.360	1.776	32	5.281	0.991	30	5.133	1.008
Experiment LEA #2	39	5.256	1.312	26	4.192	1.386	31	4.580	1.478	31	4.387	1.174
Experiment LEA #3	33	5.181	1.210	17	4.470	1.419	24	4.541	0.931	23	4.521	1.038
Experiment LEA #4	27	4.740	1.677	23	4.521	1.903	29	4.275	1.810	27	3.925	1.639
Control LEA #1							30	4.800	1.471	20	4.650	1.268
Control LEA #2							36	4.194	1.214	32	4.031	1.307
Total	127						185			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3			T3 & T4		T1 & T4	
		F	Signif.	F	Signif.		F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	18.238	.001	6.045	.05		0.649	NS	8.950	.01
Experiment LEA#2	Row	0.547	NS	2.657	NS		11.662	.001	5.655	.05
Experiment LEA#3 W/	Col.	2.110	NS	0.068	NS		0.420	NS	7.298	.01
Experiment LEA#4	Row	0.370	NS	0.102	NS		2.284	NS	3.607	NS
Experiment LEA#1 W/						Col.	0.422	NS		
Control LEA #1						Row	4.431	.05		
Experiment LEA#2 W/						Col.	0.430	NS		
Control LEA #1						Row	0.848	NS		
Experiment LEA#3 W/						Col.	0.174	NS		
Control LEA #2						Row	3.643	NS		
Experiment LEA#4 W/						Col.	0.909	NS		
Control LEA #2						Row	0.001	NS		

QUESTIONNAIRE DATA

Item 3 : Good ways are used to let me know how I can improve my performance.

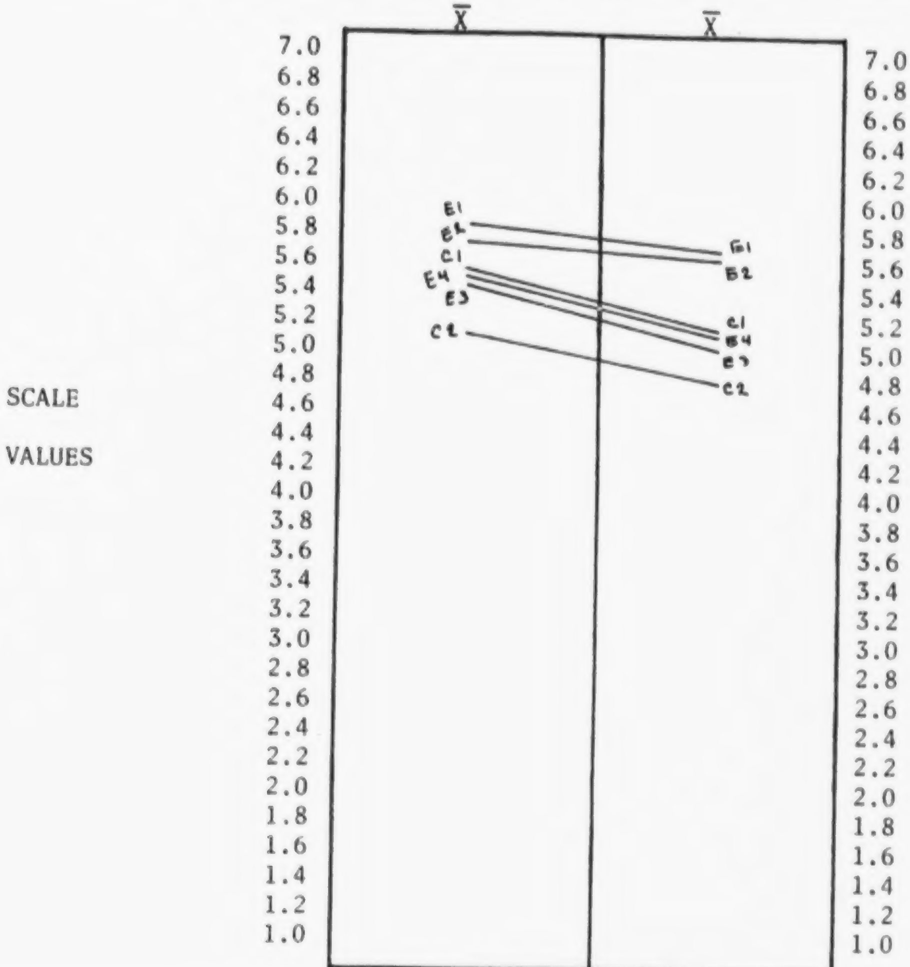


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	4.714	1.301	25	4.477	1.554	32	5.625	0.975	31	5.387	1.022
Experiment LEA #2	39	4.769	1.404	26	4.269	1.115	31	4.967	1.448	32	5.093	1.058
Experiment LEA #3	33	4.242	1.323	17	4.235	1.521	24	5.125	0.991	23	4.651	1.612
Experiment LEA #4	27	4.148	1.875	23	4.304	1.987	29	4.724	1.532	27	4.148	1.725
Control LEA #1							30	5.066	1.436	20	5.500	1.277
Control LEA #2							36	4.750	1.610	33	4.696	1.424
Total	127			91			185			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	5.731	.05	23.036	.001	0.075	NS	5.375	.01
Experiment LEA#2	Row	0.408	NS	0.642	NS	5.474	.05	0.307	NS
Experiment LEA#3 W/	Col.	0.046	NS	4.027	.05	3.116	NS	0.426	NS
Experiment LEA#4	Row	0.001	NS	0.258	NS	2.319	NS	0.909	NS
Experiment LEA#1 W/	Col.					0.186	NS		
Control LEA #1	Row					0.970	NS		
Experiment LEA#2 W/	Col.					1.231	NS		
Control LEA #1	Row					1.004	NS		
Experiment LEA#3 W/	Col.					0.917	NS		
Control LEA #2	Row					0.361	NS		
Experiment LEA#4 W/	Col.					1.235	NS		
Control LEA #2	Row					1.031	NS		

QUESTIONNAIRE DATA

Item 4 I understand what results must be produced to achieve the stated objectives of this organization.

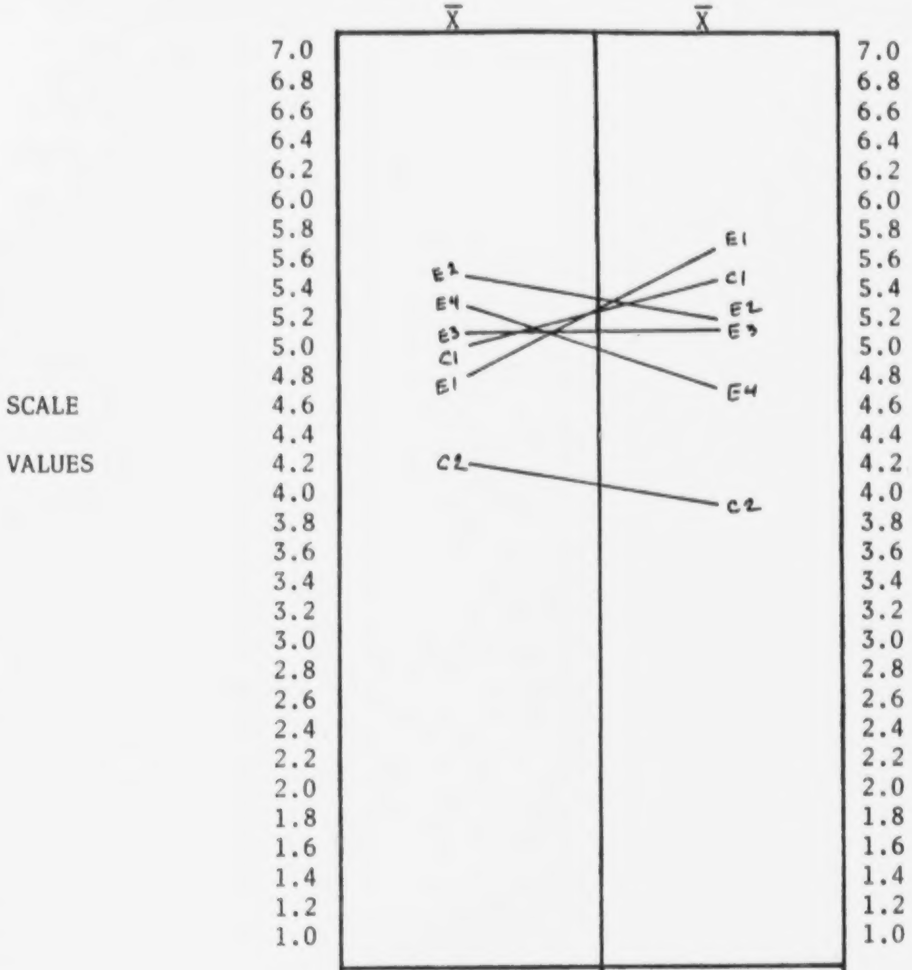


	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	5.875	0.707	31	5.741	0.855
Experimental LEA #2	31	5.774	1.023	32	5.687	1.176
Experimental LEA #3	24	5.458	0.931	23	5.043	1.106
Experimental LEA #4	29	5.517	1.242	27	5.185	1.618
Control LEA #1	30	5.566	1.006	20	5.200	1.321
Control LEA #2	36	5.166	1.183	33	4.818	1.309
Total	182			166		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1	Col.	0.415	NS
W/Experiment LEA#2	Row	0.207	NS
Experiment LEA#3	Col.	2.227	NS
W/Experiment LEA#4	Row	0.160	NS
Experiment LEA#1	Col.	1.853	NS
W/Control LEA#1	Row	5.366	.05
Experiment LEA#2	Col.	1.114	NS
W/Control LEA#1	Row	2.620	NS
Experiment LEA#3	Col.	3.021	NS
W/Control LEA#2	Row	1.385	NS
Experiment LEA#4	Col.	0.806	NS
W/Control LEA#2	Row	0.084	NS

QUESTIONNAIRE DATA

Item 5 The planning unit has been helpful to me.

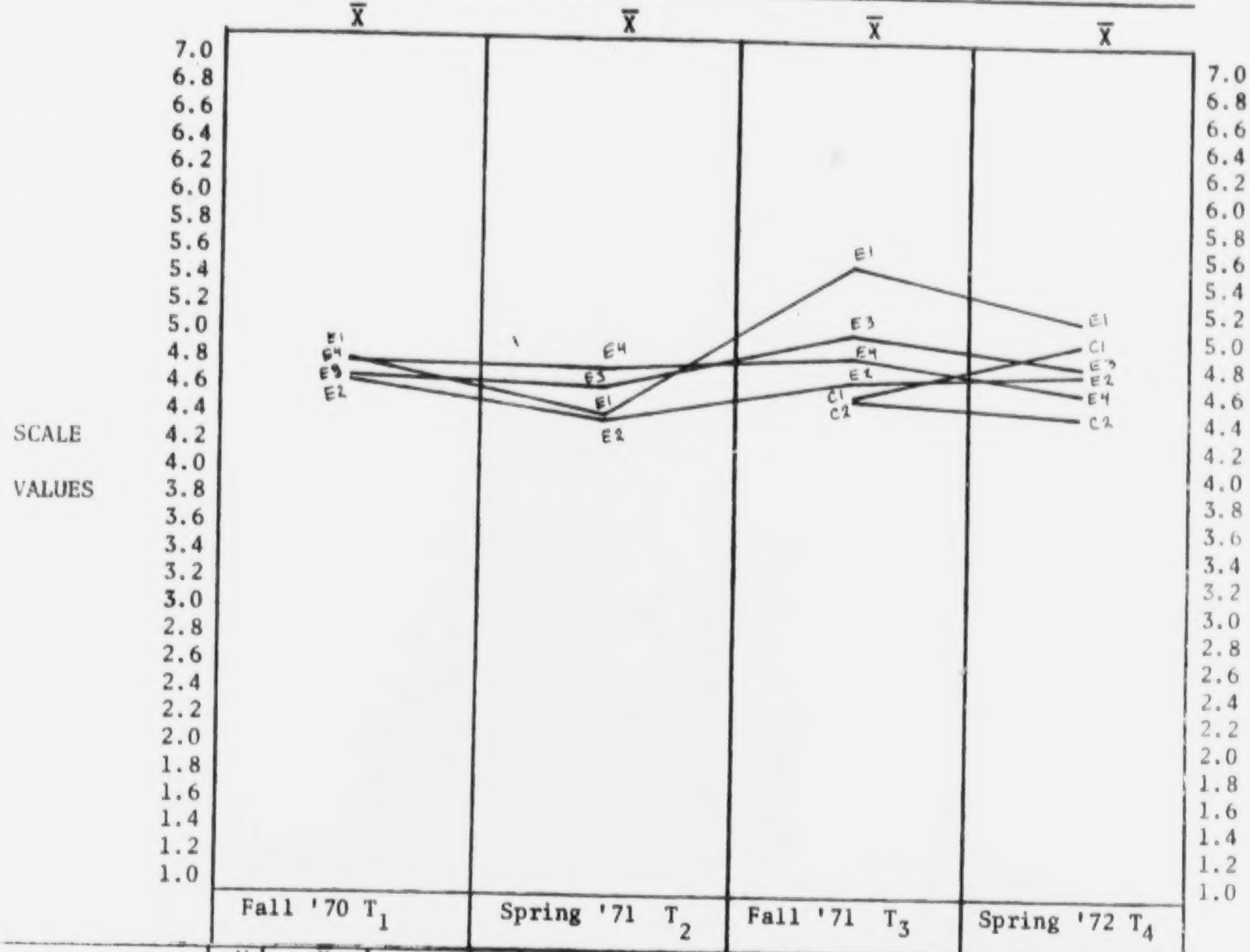


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental LEA #1	32	5.843	0.954	31	5.709	1.006
Experimental LEA #2	31	5.516	1.338	32	5.218	1.263
Experimental LEA #3	24	5.166	1.659	22	5.090	1.269
Experimental LEA #4	29	5.310	1.583	25	4.760	1.535
Control LEA #1	30	5.066	1.760	20	5.500	1.357
Control LEA #2	36	4.222	2.099	27	3.962	1.604
Total	182			166		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1	Col.	1.104	NS
W/Experiment LEA#2	Row	3.977	.05
Experiment LEA#3	Col.	1.039	NS
W/Experiment LEA#4	Row	0.093	NS
Experiment LEA#1	Col.	0.362	NS
W/Control LEA#1	Row	3.939	.05
Experiment LEA#2	Col.	0.060	NS
W/Control LEA#1	Row	0.092	NS
Experiment LEA#3	Col.	0.243	NS
W/Control LEA#2	Row	9.323	.01
Experiment LEA#4	Col.	1.528	NS
W/Control LEA#2	Row	8.285	.01

QUESTIONNAIRE DATA

Item 6 : I have good ways for knowing how good our results are.

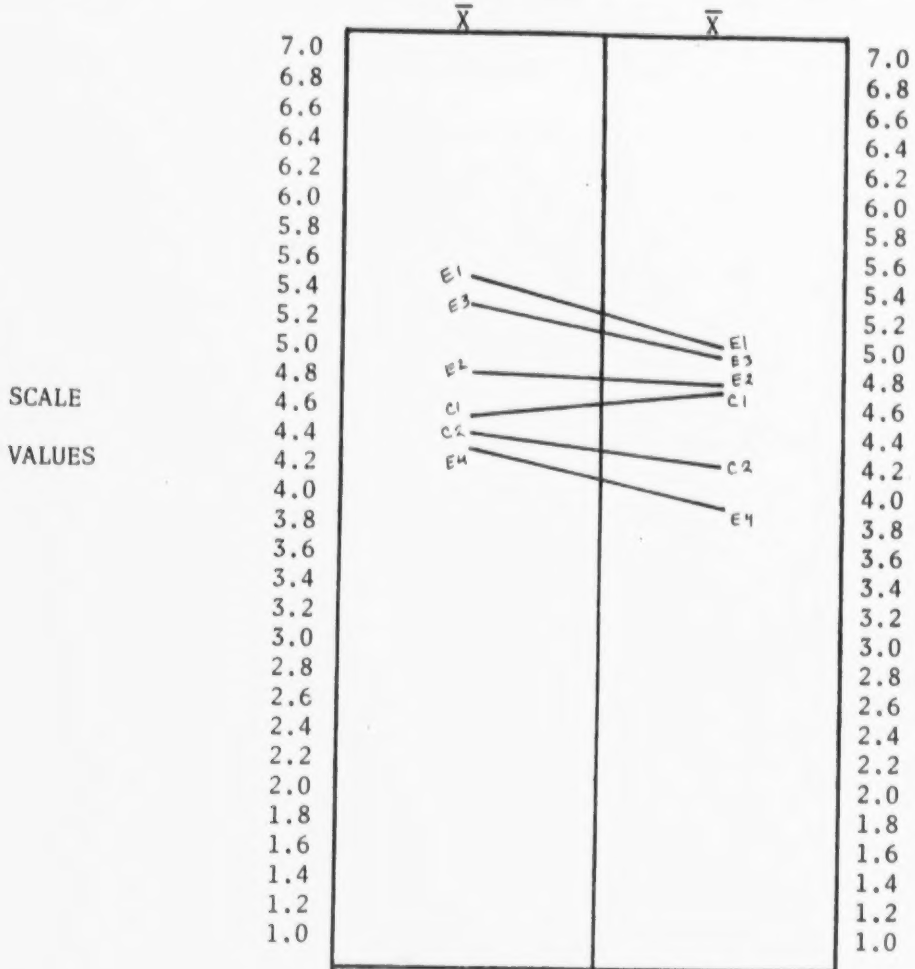


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment LEA #1	28	4.857	1.044	25	4.480	1.475	32	5.531	0.983	31	5.193	0.980
Experiment LEA #2	39	4.641	1.307	26	4.423	1.064	31	4.709	1.295	32	4.750	0.983
Experiment LEA #3	33	4.696	1.045	17	4.647	0.861	24	5.041	0.806	23	4.782	0.951
Experiment LEA #4	27	4.851	1.616	23	4.782	1.881	29	4.896	1.371	27	4.629	1.620
Control LEA #1							30	4.533	1.166	20	5.000	1.123
Control LEA #2							36	4.583	1.155	33	4.454	1.063
Total	127			91			185			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/ Experiment LEA#2	Col.	1.650	NS	8.616	.01	0.610	NS	1.306	NS
	Row	0.347	NS	3.715	NS	11.044	.001	2.865	NS
Experiment LEA#3 W/ Experiment LEA#4	Col.	0.041	NS	0.814	NS	1.121	NS	0.070	NS
	Row	0.248	NS	0.000	NS	0.360	NS	0.000	NS
Experiment LEA#1 W/ Control LEA #1	Col.					0.100	NS		
	Row					8.617	.01		
Experiment LEA#2 W/ Control LEA #1	Col.					1.326	NS		
	Row					0.027	NS		
Experiment LEA#3 W/ Control LEA #2	Col.					0.998	NS		
	Row					4.105	.05		
Experiment LEA#4 W/ Control LEA #2	Col.					0.716	NS		
	Row					1.091	NS		

QUESTIONNAIRE DATA

Item 7 My organization has reliable ways for knowing how well it is attaining its objectives.

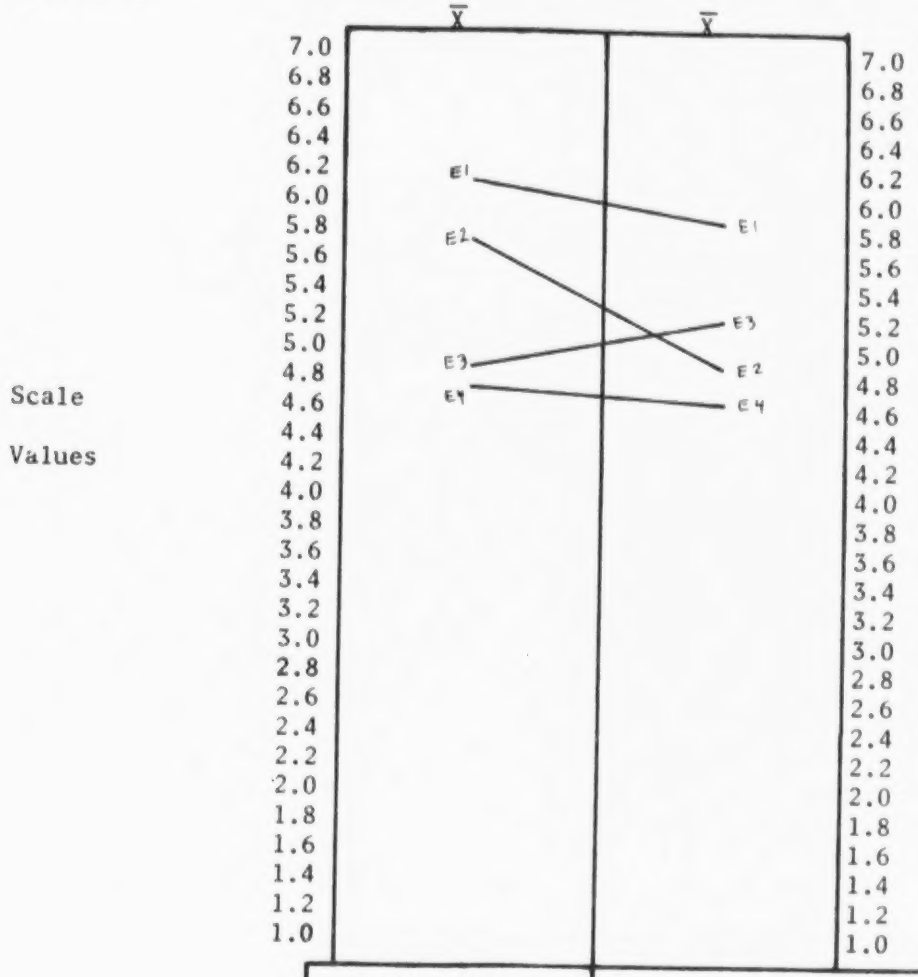


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental LEA #1	32	5.531	1.077	31	5.064	0.963
Experimental LEA #2	31	4.870	1.231	32	4.812	1.029
Experimental LEA #3	24	5.333	1.007	23	5.000	0.953
Experimental LEA #4	29	4.344	1.541	27	3.962	1.556
Control LEA #1	30	4.566	1.430	20	4.750	1.446
Control LEA #2	36	4.444	1.252	33	4.242	1.369
Total	182			166		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1	Col.	1.863	NS
W/Experiment LEA#2	Row	5.621	.05
Experiment LEA#3	Col.	1.870	NS
W/Experiment LEA#4	Row	14.999	.001
Experiment LEA#1	Col.	0.365	NS
W/Control LEA#1	Row	7.452	.01
Experiment LEA#2	Col.	0.065	NS
W/Control LEA#1	Row	0.562	NS
Experiment LEA#3	Col.	1.415	NS
W/Control LEA#2	Row	13.392	.001
Experiment LEA#4	Col.	1.302	NS
W/Control LEA#2	Row	0.548	NS

QUESTIONNAIRE DATA

Item 8 I think that the objectives developed during AMA training are clearly stated with regard to results expected.

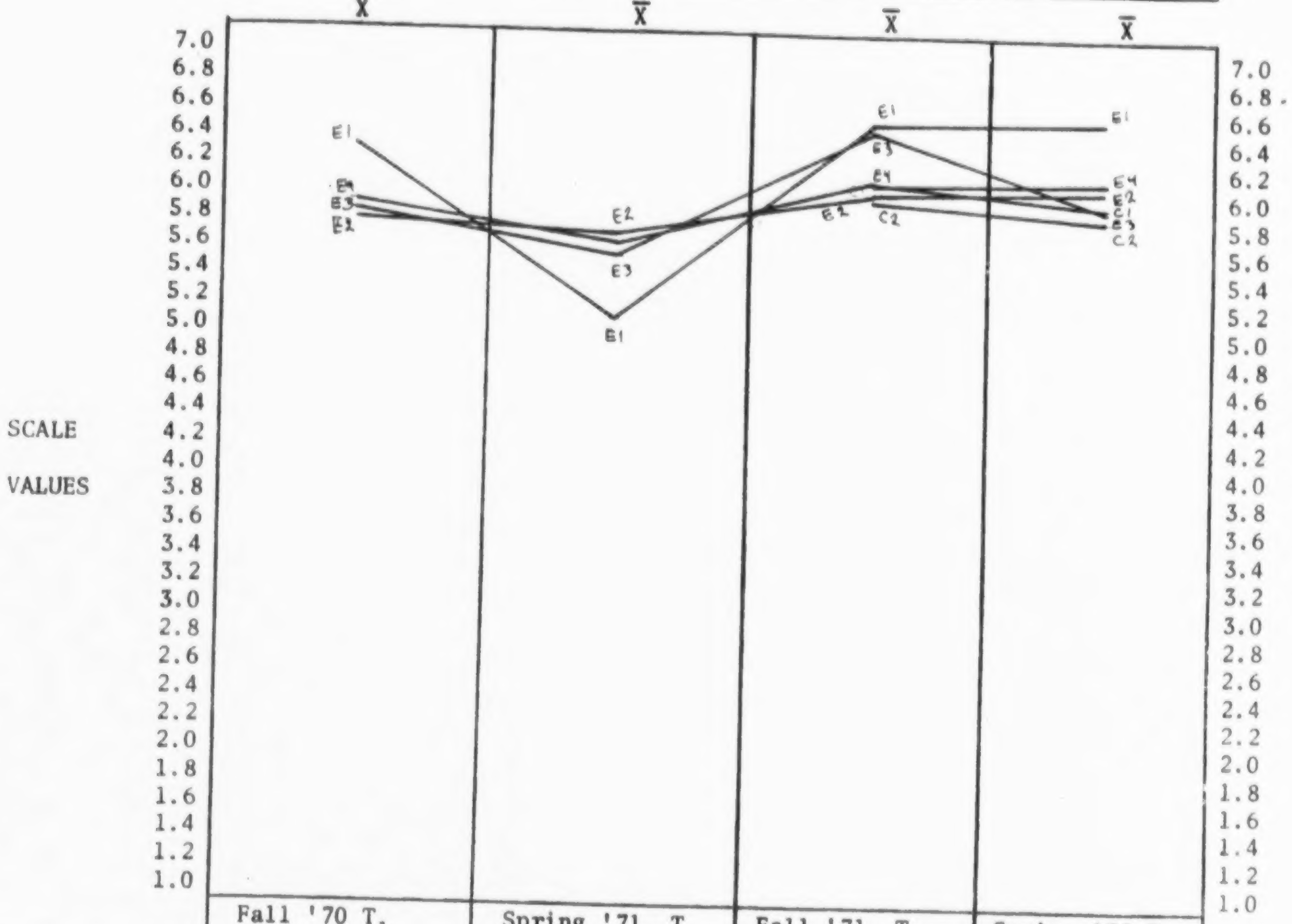


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental LEA #1	32	6.187	0.820	31	5.903	1.075
Experimental LEA #2	31	5.709	1.442	32	5.593	1.316
Experimental LEA #3	24	4.916	2.083	22	5.227	1.540
Experimental LEA #4	29	4.793	1.820	26	4.[illegible]92	1.805
Total	116			111		

Two-Way Analysis of Variance		T_3 & T_4	
		F	Signif.
Experimental LEA#1 W/	Col.	0.896	NS
Experimental LEA#2	Row	3.467	NS
Experimental LEA#3 W/	Col.	0.082	NS
Experimental LEA#4	Row	0.811	NS

QUESTIONNAIRE DATA

Item 1 : My manager makes it clear that he is committed to the success of our projects.

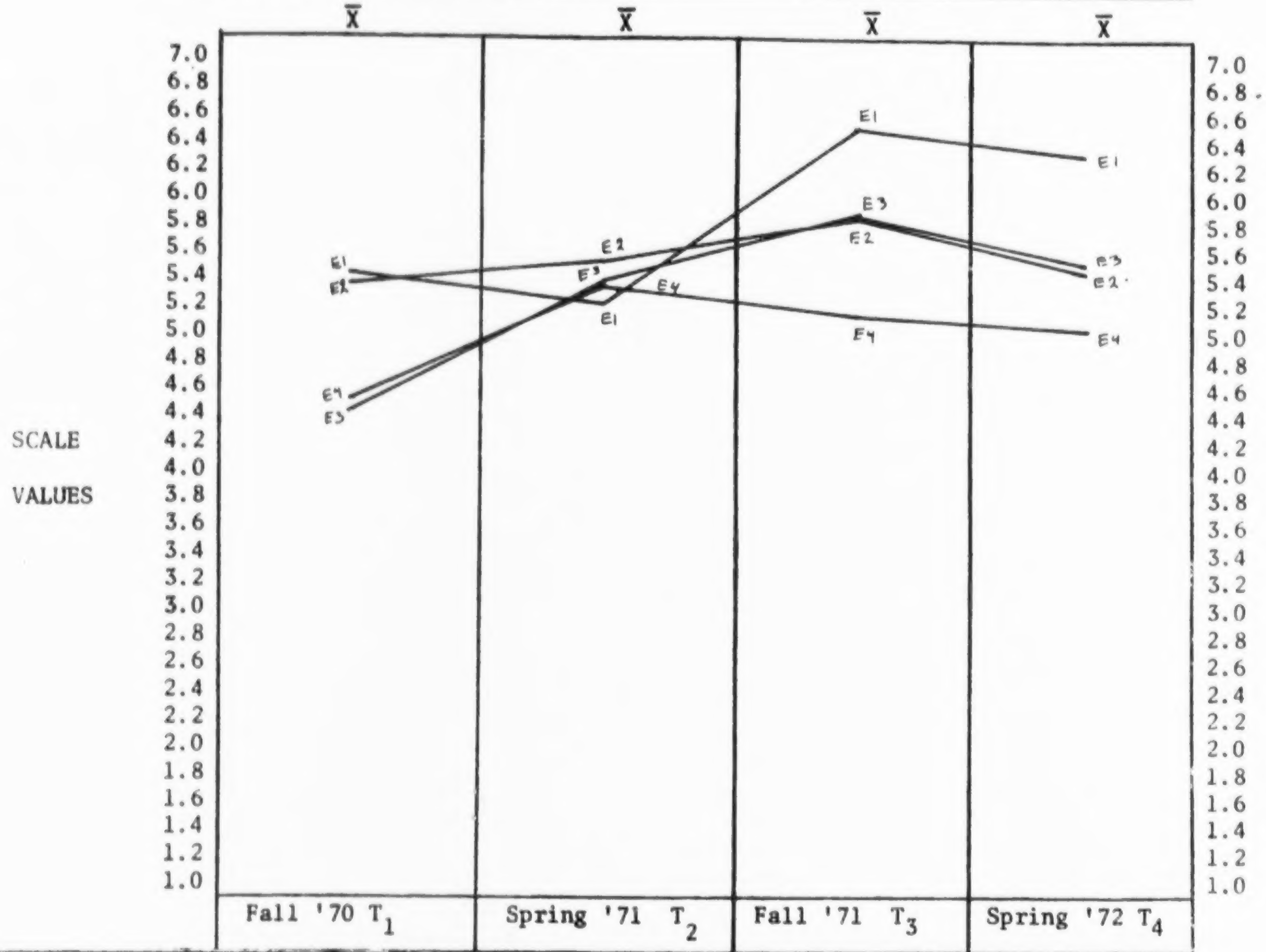


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
xperiment LEA #1	28	6.351	0.731	25	5.160	1.675	32	6.531	0.567	31	6.548	0.623
xperiment LEA #2	39	5.820	1.072	26	5.730	1.218	31	6.032	1.471	31	6.096	1.220
xperiment LEA #3	33	5.878	1.218	17	5.588	1.277	24	6.500	0.834	23	5.956	1.397
xperiment LEA #4	27	5.925	1.439	23	5.652	1.824	29	6.137	1.328	27	5.962	1.453
ontrol LEA #1							30	6.133	1.224	20	6.150	0.812
ontrol LEA #2							36	6.027	1.403	33	5.909	1.011
Total	127			91			185			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	8.301	.01	12.083	.001	0.047	NS	1.894	NS
Experiment LEA#2	Row	0.005	NS	0.022	NS	6.503	.05	8.466	.01
Experiment LEA#3 W/	Col.	0.897	NS	5.911	.05	1.996	NS	0.047	NS
Experiment LEA#4	Row	0.034	NS	0.269	NS	0.489	NS	0.010	NS
Experiment LEA#1 W/ Control LEA #1	Col.					0.010	NS		
	Row					6.060	.05		
Experiment LEA#2 W/ Control LEA #1	Col.					0.029	NS		
	Row					0.104	NS		
Experiment LEA#3 W/ Control LEA #2	Col.					2.134	NS		
	Row					1.314	NS		
Experiment LEA#4 W/ Control LEA #2	Col.					0.390	NS		
	Row					0.121	NS		

QUESTIONNAIRE DATA

Item 2 : My manager has expressed the belief that the AMA's training program has been helpful.

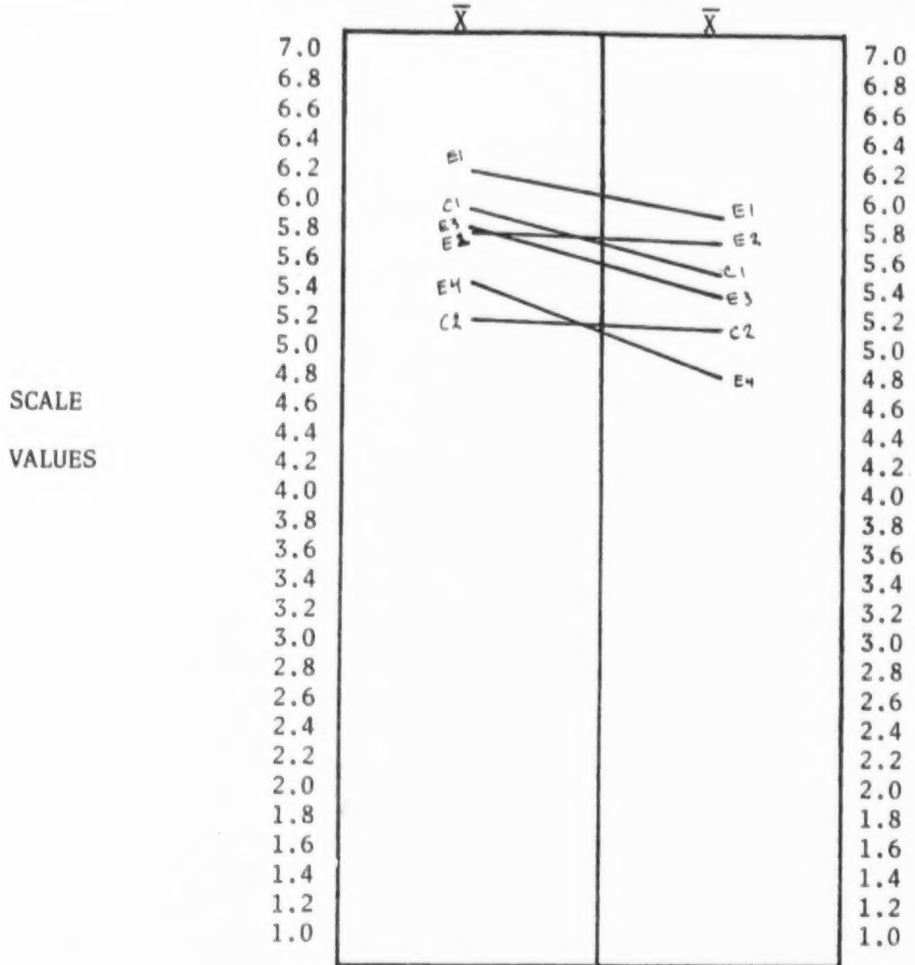


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	5.451	1.586	25	5.240	1.984	32	6.531	0.671	31	6.354	0.838
Experiment LEA #2	36	5.361	1.807	26	5.538	1.654	31	5.870	1.586	32	5.437	1.342
Experiment LEA #3	33	4.454	2.180	17	5.411	1.169	24	5.875	1.650	23	5.521	1.377
Experiment LEA #4	27	4.518	2.343	23	5.304	1.635	29	5.172	2.054	26	5.076	1.622
Total	124			91			116			112		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	0.768	NS	8.091	.01	2.146	NS	0.694	NS
Experiment LEA#2	Row	0.262	NS	0.401	NS	14.364	.001	9.046	.01
Experiment LEA#3 W/	Col.	4.256	.05	0.188	NS	0.432	NS	4.617	.05
Experiment LEA#4	Row	0.002	NS	1.129	NS	2.830	NS	0.253	NS

QUESTIONNAIRE DATA

Item 3 My manager understands planning theory and is able to put it into practice.

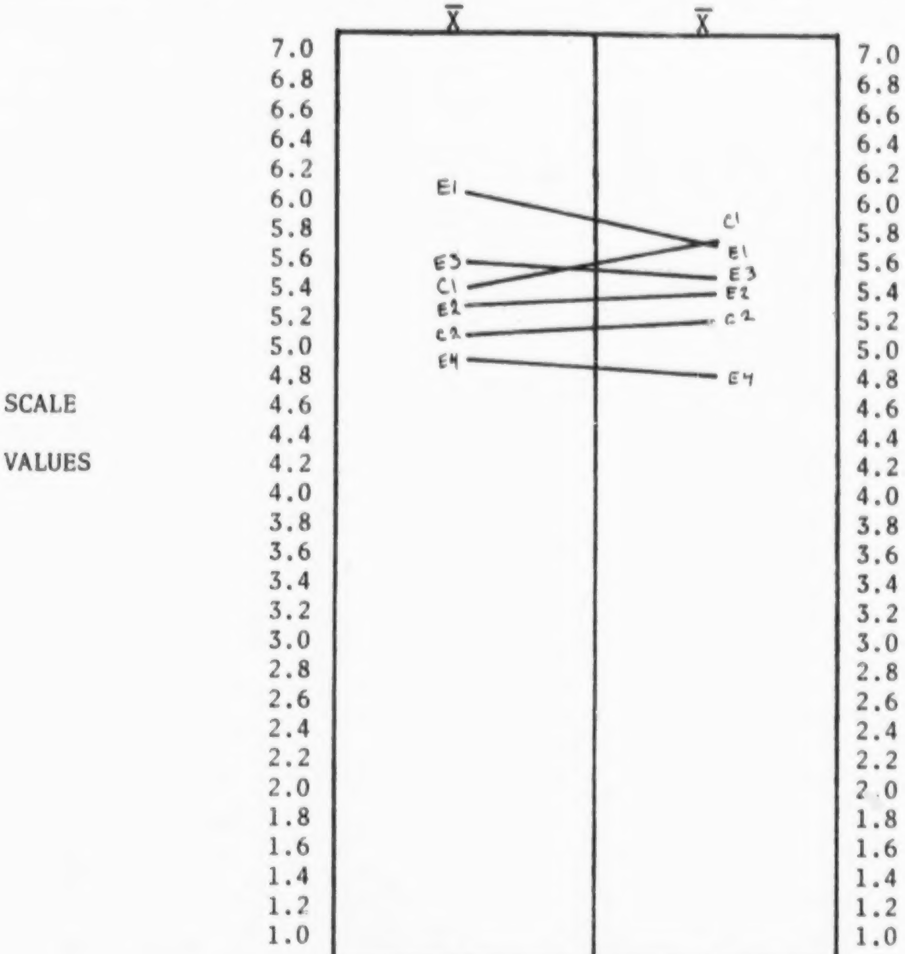


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental LEA #1	32	6.218	0.792	31	5.935	0.853
Experimental LEA #2	31	5.806	1.222	32	5.750	1.077
Experimental LEA #3	24	5.833	0.816	23	5.391	1.117
Experimental LEA #4	29	5.482	1.183	27	4.851	1.725
Control LEA #1	30	5.933	0.980	20	5.550	1.276
Control LEA #2	36	5.222	1.605	31	5.161	1.185
Total	182			166		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1	Col.	0.907	NS
W/Experiment LEA#2	Row	2.809	NS
Experiment LEA#3	Col.	4.562	.05
W/Experiment LEA#4	Row	3.139	NS
Experiment LEA#1	Col.	3.293	NS
W/Control LEA#1	Row	3.335	NS
Experiment LEA#2	Col.	1.028	NS
W/Control LEA#1	Row	0.028	NS
Experiment LEA#3	Col.	1.093	NS
W/Control LEA#2	Row	3.059	NS
Experiment LEA#4	Col.	1.738	NS
W/Control LEA#2	Row	0.008	NS

QUESTIONNAIRE DATA

Item 4 I believe my organization gives me adequate training to do my work effectively.

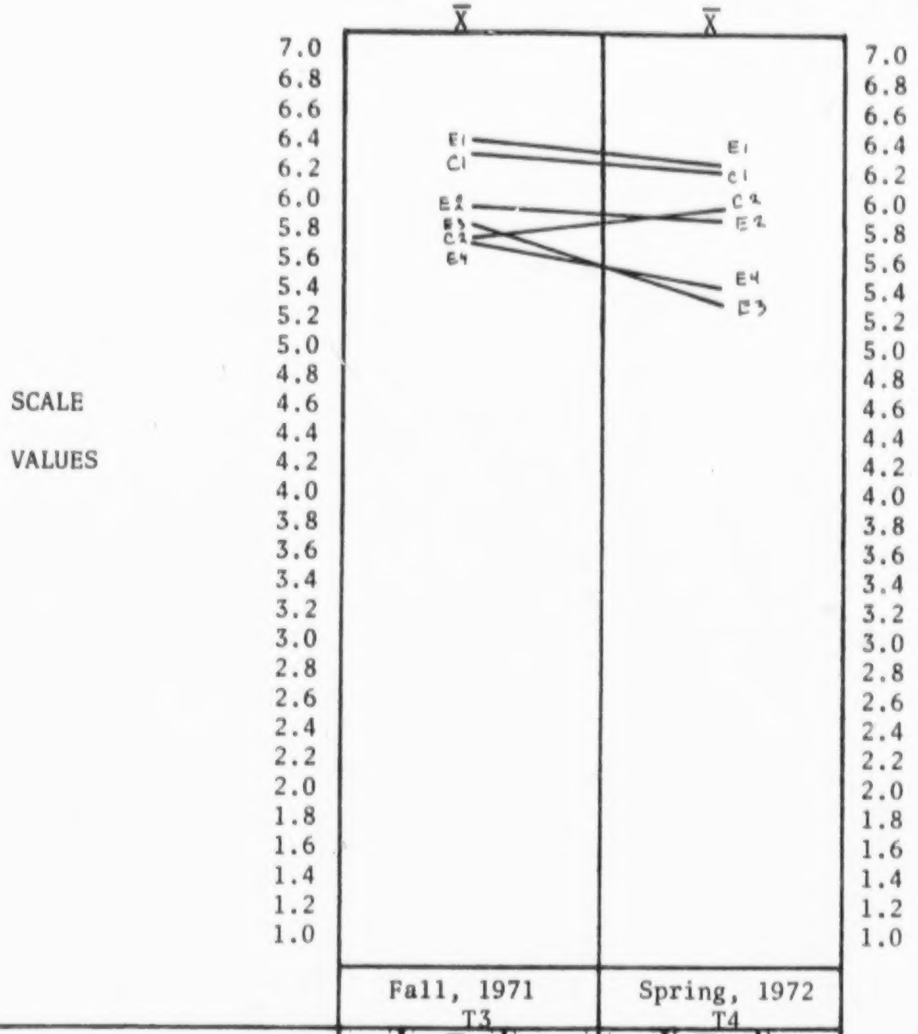


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental LEA #1	32	6.093	0.856	31	5.741	0.998
Experimental LEA #2	31	5.322	1.681	32	5.437	1.216
Experimental LEA #3	24	5.625	0.824	23	5.521	0.897
Experimental LEA #4	29	4.965	1.636	27	4.851	1.511
Control LEA #1	30	5.433	1.165	20	5.750	0.966
Control LEA #2	36	5.138	1.457	33	5.212	1.293
Total	182			166		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1	Col.	0.294	NS
W/Experiment LEA#2	Row	6.062	.05
Experiment LEA#3	Col.	0.177	NS
W/Experiment LEA#4	Row	6.657	.01
Experiment LEA#1	Col.	0.008	NS
W/Control LEA#1	Row	2.877	NS
Experiment LEA#2	Col.	0.736	NS
W/Control LEA#1	Row	0.708	NS
Experiment LEA#3	Col.	0.004	NS
W/Control LEA#2	Row	3.071	NS
Experiment LEA#4	Col.	0.005	NS
W/Control LEA#2	Row	1.014	NS

QUESTIONNAIRE DATA

Item 5 I feel good about my manager's ability to plan.

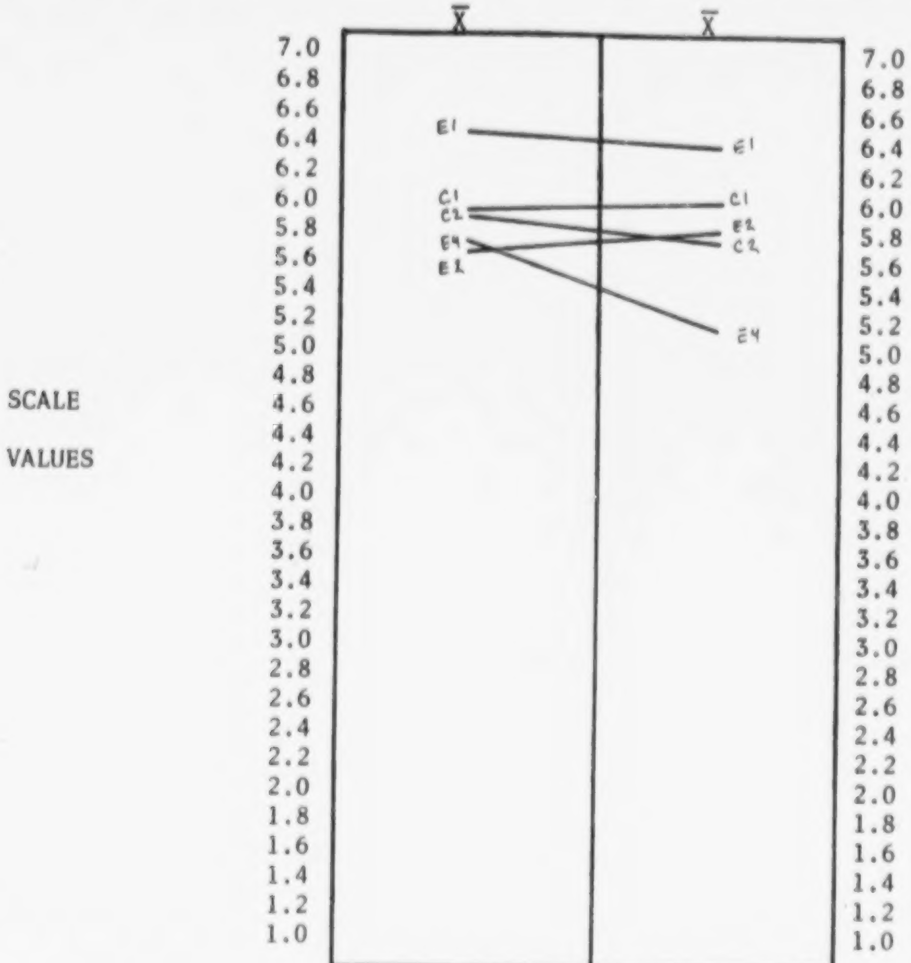


	N	X̄	SD	N	X̄	SD
Experimental LEA #1	32	6.437	0.715	31	6.290	0.863
Experimental LEA #2	31	6.000	1.341	32	5.906	1.117
Experimental LEA #3	24	5.875	0.899	23	5.347	1.335
Experimental LEA #4	29	5.724	1.306	27	5.444	1.648
Control LEA #1	30	6.366	1.066	20	6.250	0.716
Control LEA #2	36	5.805	1.450	33	6.000	0.935
Total	182			166		

Two-Way Analysis of Var.		T3 & T4 F	Signif.
Experiment LEA#1	Col.	0.425	NS
W/Experiment LEA#2	Row	4.949	.05
Experiment LEA#3	Col.	2.333	NS
W/Experiment LEA#4	Row	0.010	NS
Experiment LEA#1	Col.	0.638	NS
W/Control LEA#1	Row	0.113	NS
Experiment LEA#2	Col.	0.242	NS
W/Control LEA#1	Row	2.766	NS
Experiment LEA#3	Col.	0.542	NS
W/Control LEA#2	Row	1.665	NS
Experiment LEA#4	Col.	0.030	NS
W/Control LEA#2	Row	1.721	NS

QUESTIONNAIRE DATA

Item 6 My manager provides me with adequate support to perform my job.

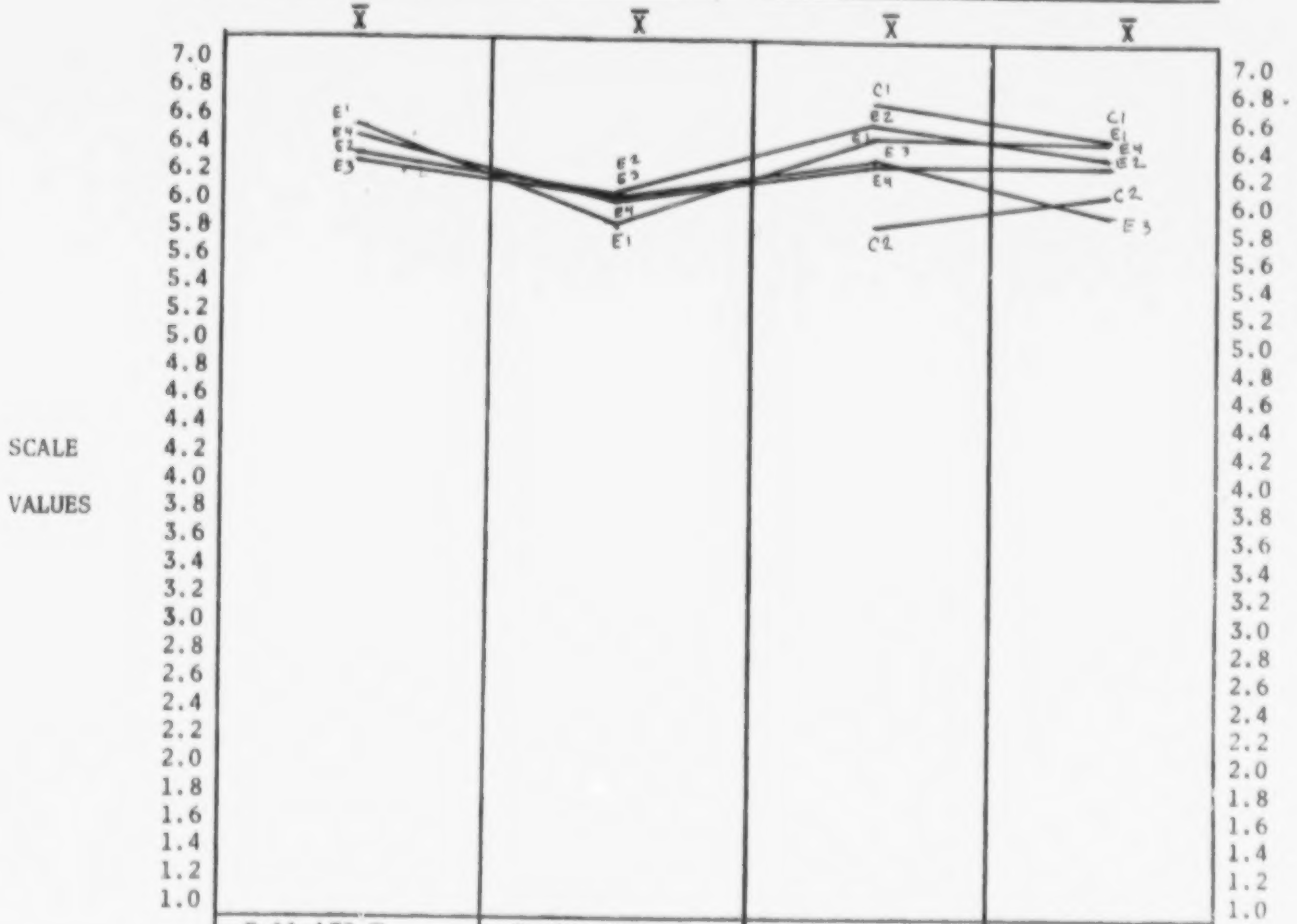


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental LEA #1	32	6.500	0.508	31	6.419	0.672
Experimental LEA #2	31	5.709	1.395	32	5.843	1.080
Experimental LEA #3	24	5.916	0.974	23	5.782	1.241
Experimental LEA #4	29	5.793	1.206	27	5.185	1.545
Control LEA #1	30	5.966	1.351	20	6.050	0.998
Control LEA #2	36	5.861	1.457	33	5.787	1.139
Total	182			166		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1	Col.	0.023	NS
W/Experiment LEA#2	Row	15.428	.001
Experiment LEA#3	Col.	2.193	NS
W/Experiment LEA#4	Row	2.071	NS
Experiment LEA#1	Col.	0.000	NS
W/Control LEA#1	Row	6.471	.05
Experiment LEA#2	Col.	0.210	NS
W/Control LEA#1	Row	0.956	NS
Experiment LEA#3	Col.	0.195	NS
W/Control LEA#2	Row	0.011	NS
Experiment LEA#4	Col.	1.981	NS
W/Control LEA#2	Row	1.920	NS

QUESTIONNAIRE DATA

Item 1 : As I see it, planning is an integral part of running the state's schools.

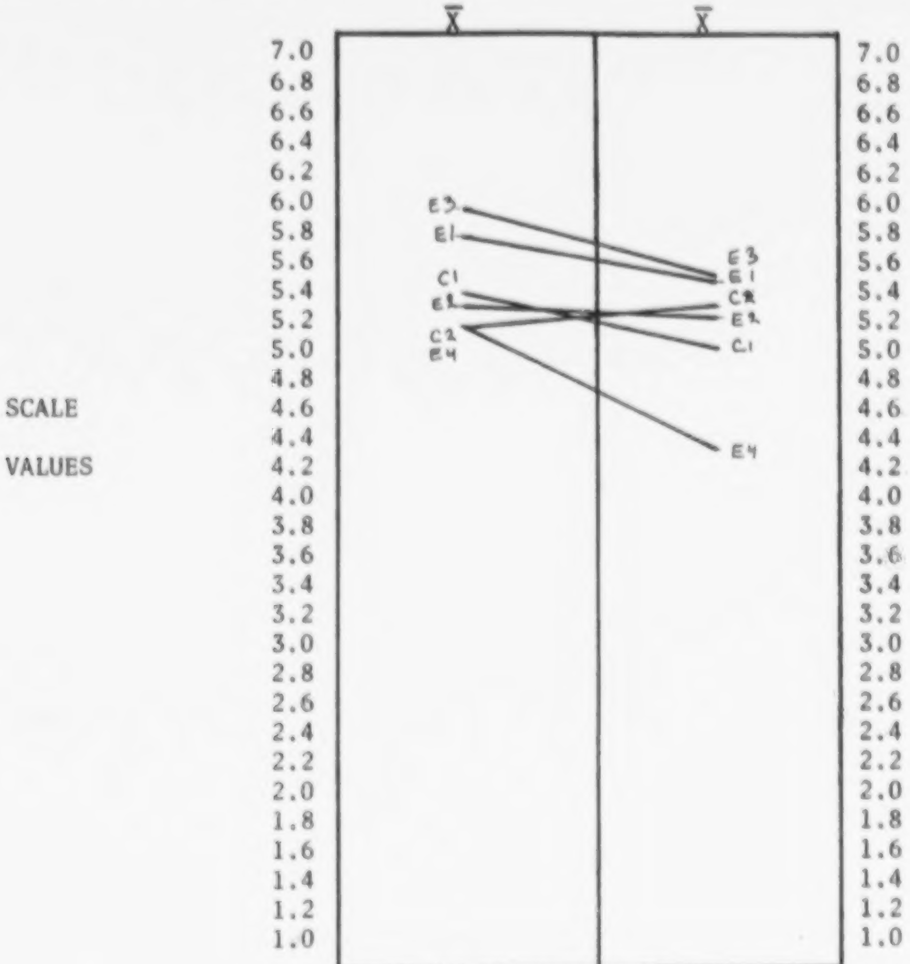


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X̄	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	6.571	0.503	25	5.480	1.636	32	6.500	0.915	31	6.483	0.676
Experiment LEA #2	39	6.384	0.906	26	6.076	0.976	31	6.580	0.620	32	6.343	0.970
Experiment LEA #3	33	6.363	1.025	17	6.058	1.197	24	6.375	0.769	23	5.956	1.065
Experiment LEA #4	27	6.481	0.802	23	6.043	1.691	29	6.344	0.897	26	6.307	0.970
Control LEA #1							30	6.766	0.430	20	6.550	0.686
Control LEA #2							36	5.861	1.437	33	6.090	0.913
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	12.649	.001	14.318	.001	0.763	NS	0.205	NS
Experiment LEA#2	Row	1.086	NS	2.831	NS	0.042	NS	1.330	NS
Experiment LEA#3 W/	Col.	2.291	NS	1.557	NS	1.519	NS	2.400	NS
Experiment LEA#4	Row	0.043	NS	0.008	NS	0.754	NS	1.564	NS
Experiment LEA#1 W/ Control LEA #1	Col.					0.744	NS		
	Row					1.520	NS		
Experiment LEA#2 W/ Control LEA #1	Col.					2.772	NS		
	Row					2.073	NS		
Experiment LEA#3 W/ Control LEA #2	Col.					0.202	NS		
	Row					0.818	NS		
Experiment LEA#4 W/ Control LEA #2	Col.					0.234	NS		
	Row					3.096	NS		

QUESTIONNAIRE DATA

Item 2 As I see it, persons in this organization put a lot of effort into planning.

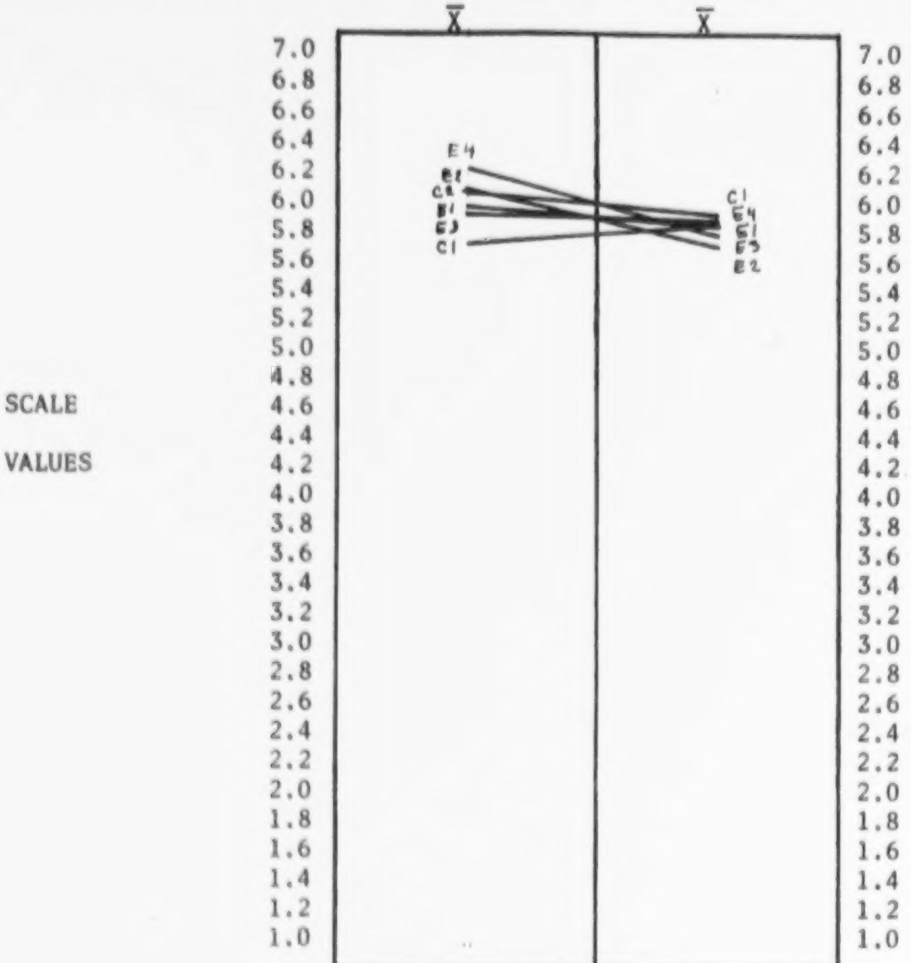


	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	5.812	0.820	32	5.500	1.135
Experimental LEA #2	31	5.322	1.446	32	5.250	0.915
Experimental LEA #3	24	6.000	0.780	23	5.521	1.122
Experimental LEA #4	29	5.275	1.360	27	4.370	1.390
Control LEA #1	30	5.400	1.135	20	5.050	1.275
Control LEA #2	36	5.277	1.322	33	5.333	1.241
Total	182			166		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1	Col.	0.967	NS
W/Experiment LEA#2	Row	3.571	NS
Experiment LEA#3	Col.	8.412	.01
W/Experiment LEA#4	Row	15.454	.001
Experiment LEA#1	Col.	2.565	NS
W/Control LEA#1	Row	4.348	.05
Experiment LEA#2	Col.	0.844	NS
W/Control LEA#1	Row	0.071	NS
Experiment LEA#3	Col.	0.917	NS
W/Control LEA#2	Row	4.257	.05
Experiment LEA#4	Col.	3.171	NS
W/Control LEA#2	Row	4.087	.05

QUESTIONNAIRE DATA

Item 3 My capability to plan effectively will positively affect my future career in this organization.

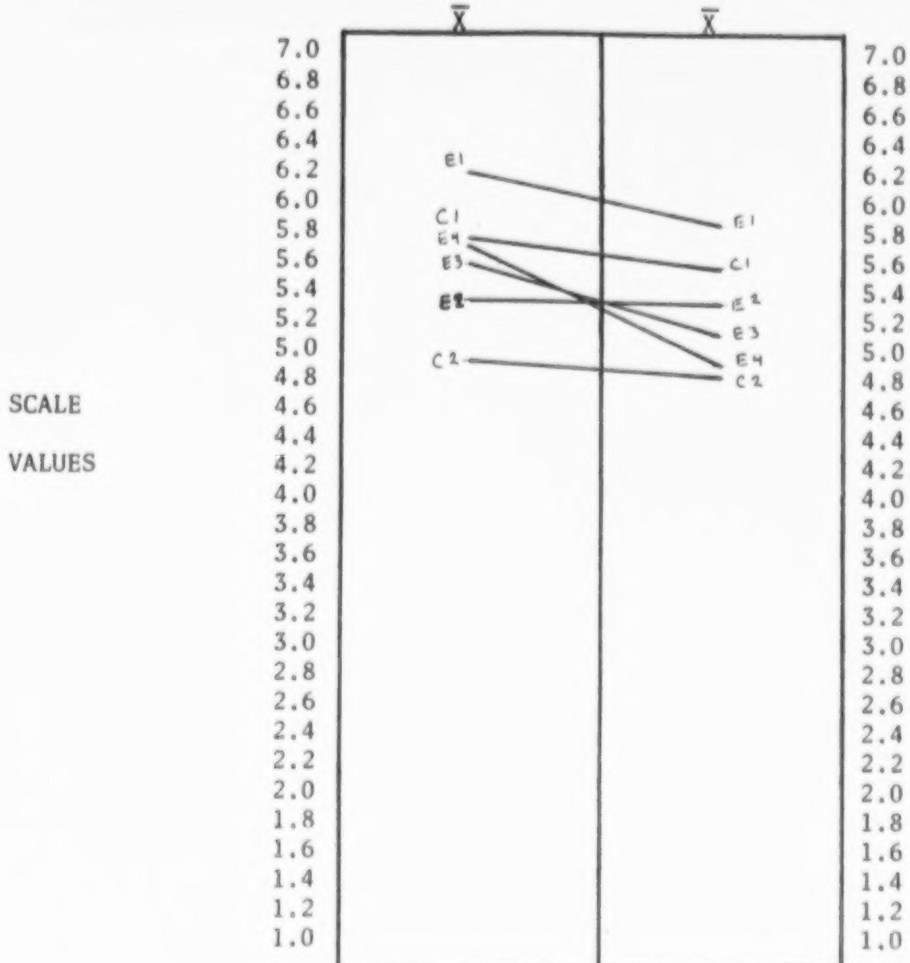


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental LEA #1	32	5.968	1.402	31	5.870	1.258
Experimental LEA #2	31	6.161	0.820	32	5.750	1.016
Experimental LEA #3	24	5.958	1.398	23	5.782	1.277
Experimental LEA #4	29	6.275	0.648	27	5.888	1.250
Control LEA #1	30	5.733	1.460	29	5.900	1.209
Control LEA #2	36	6.138	1.245	33	5.969	0.951
Total	182			166		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1	Col.	1.549	NS
W/Experiment LEA#2	Row	0.030	NS
Experiment LEA#3	Col.	1.500	NS
W/Experiment LEA#4	Row	0.8517	NS
Experiment LEA#1	Col.	0.017	NS
W/Control LEA#1	Row	0.159	NS
Experiment LEA#2	Col.	0.313	NS
W/Control LEA#1	Row	0.404	NS
Experiment LEA#3	Col.	0.566	NS
W/Control LEA#2	Row	0.643	NS
Experiment LEA#4	Col.	2.127	NS
W/Control LEA#2	Row	0.021	NS

QUESTIONNAIRE DATA

Item 4 The activities relating to planning are having an effect on the policy of this organization.



	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental LEA #1	32	6.218	0.750	31	5.870	0.921
Experimental LEA #2	31	5.387	1.453	32	5.375	1.157
Experimental LEA #3	24	5.625	0.923	23	5.130	1.057
Experimental LEA #4	29	5.724	1.250	26	4.923	1.547
Control LEA #1	30	5.733	1.048	20	5.600	0.994
Control LEA #2	36	4.972	1.664	31	4.838	1.344
Total	182			166		

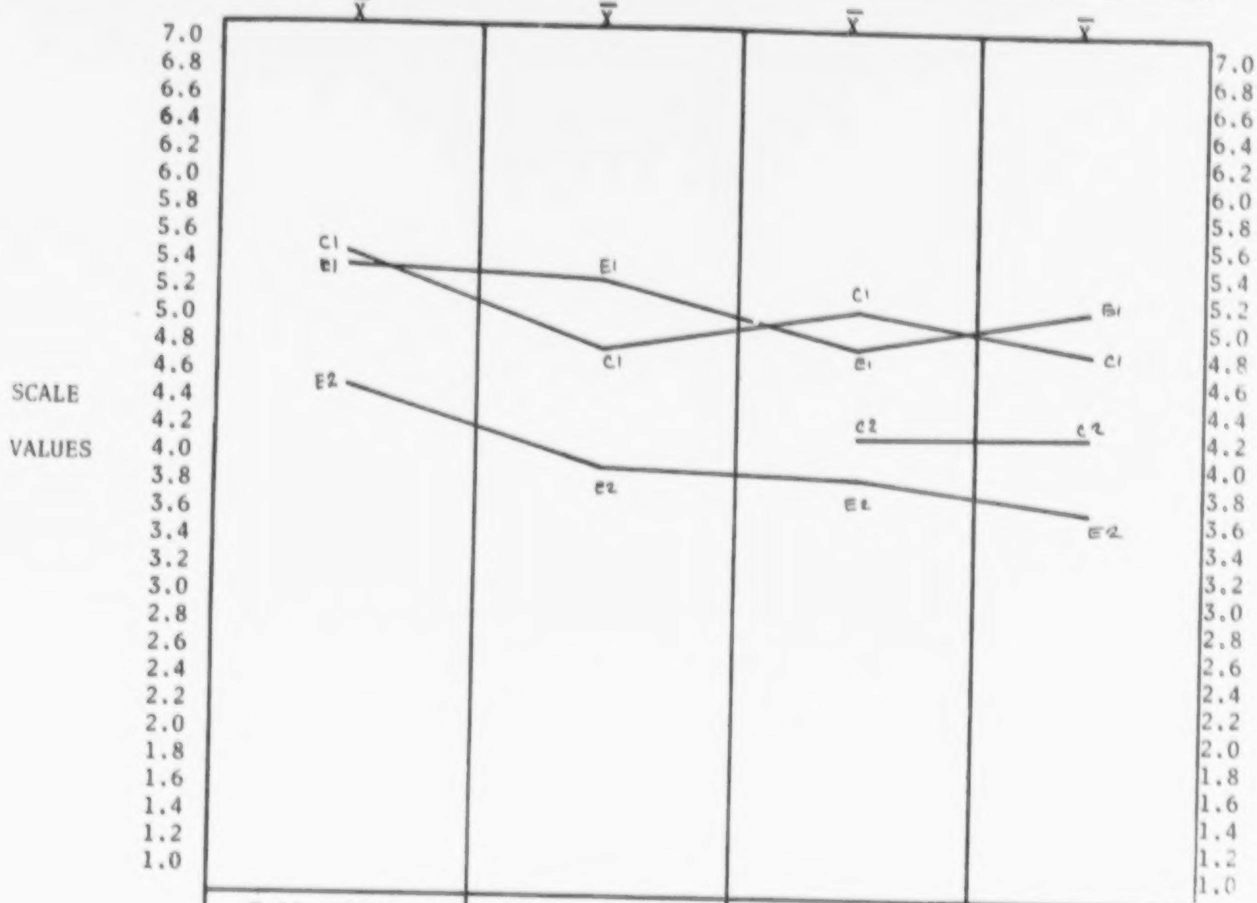
Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1	Col.	0.841	NS
W/Experiment LEA#2	Row	11.453	.001
Experiment LEA#3	Col.	7.037	NS
W/Experiment LEA#4	Row	0.049	NS
Experiment LEA#1	Col.	1.835	NS
W/Control LEA#1	Row	4.536	.05
Experiment LEA#2	Col.	0.100	NS
W/Control LEA#1	Row	1.557	NS
Experiment LEA#3	Col.	1.529	NS
W/Control LEA#2	Row	3.459	NS
Experiment LEA#4	Col.	3.041	NS
W/Control LEA#2	Row	2.435	NS

APPENDIX B

SCHEMATIC PRESENTATION OF DATA - INTERVENING VARIABLES, CHAPTER FIVE

QUESTIONNAIRE DATA

Item 1 Based on information I have received from my boss, I know if I am measuring up in my job.

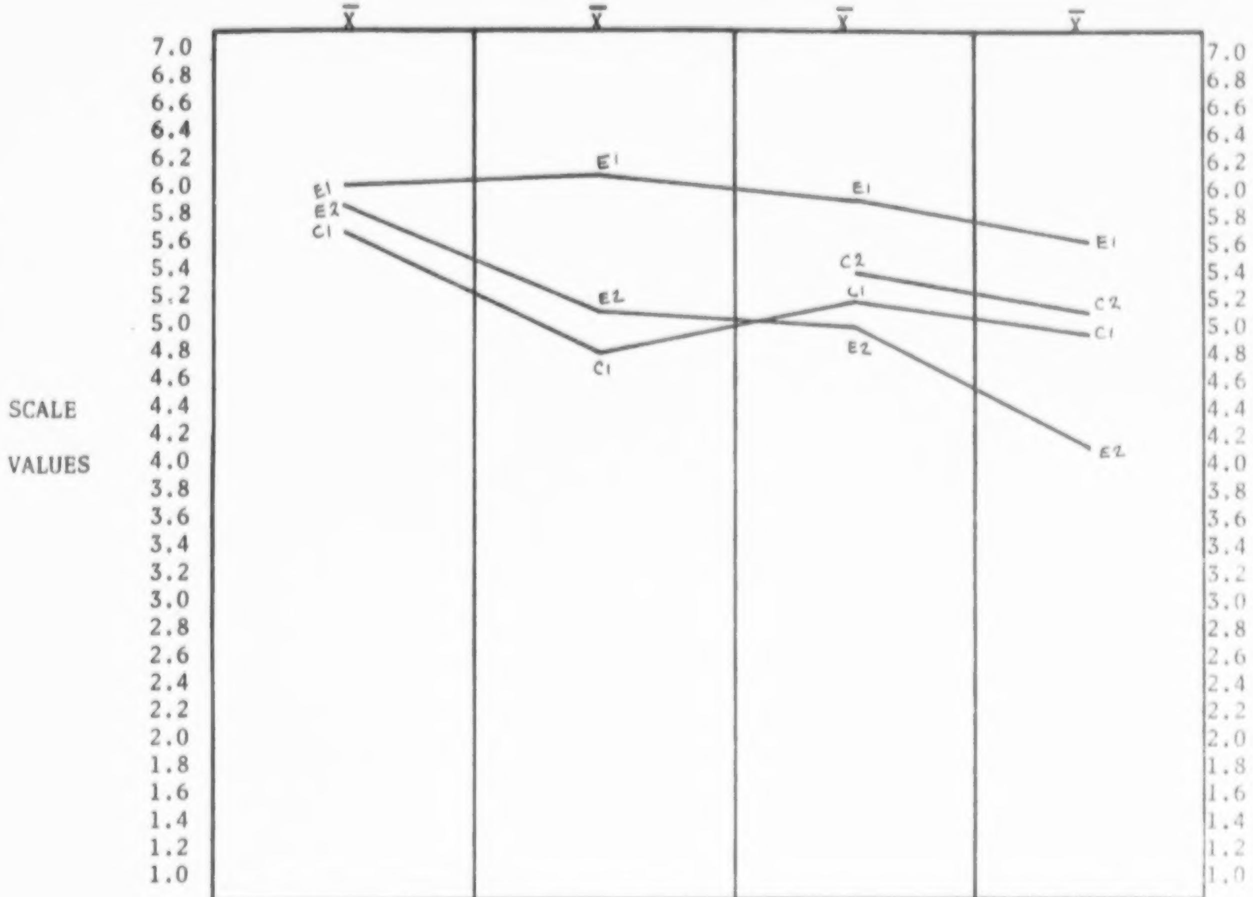


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	5.436	1.046	73	5.342	1.387	68	4.867	1.691	40	5.150	1.350
Experimental SED #2	60	4.534	1.751	52	3.981	1.743	45	3.933	1.656	40	3.700	1.572
Control SED #1	66	5.500	1.256	61	4.836	1.551	67	5.134	1.324	61	4.868	1.488
Control SED #2							61	4.213	1.623	66	4.242	1.489
Total	165			186			241			207		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	1.519	NS	0.141	NS	0.001	NS	5.994	.05
	Row	4.455	.05	0.583	NS	0.001	NS	0.307	NS
Experiment SED#2 W/ Control SED #1	Col.	19.848	.001	0.474	NS	1.420	NS	12.781	.001
	Row	8.848	.01	22.933	.001	32.074	.001	27.089	.001
Experiment SED#1 W/ Control SED #2	Col.					0.557	NS		
	Row					13.995	.001		
Experiment SED#2 W/ Control SED #2	Col.					0.211	NS		
	Row					3.435	NS		

QUESTIONNAIRE DATA

Item 2 My manager encourages and supports innovation.

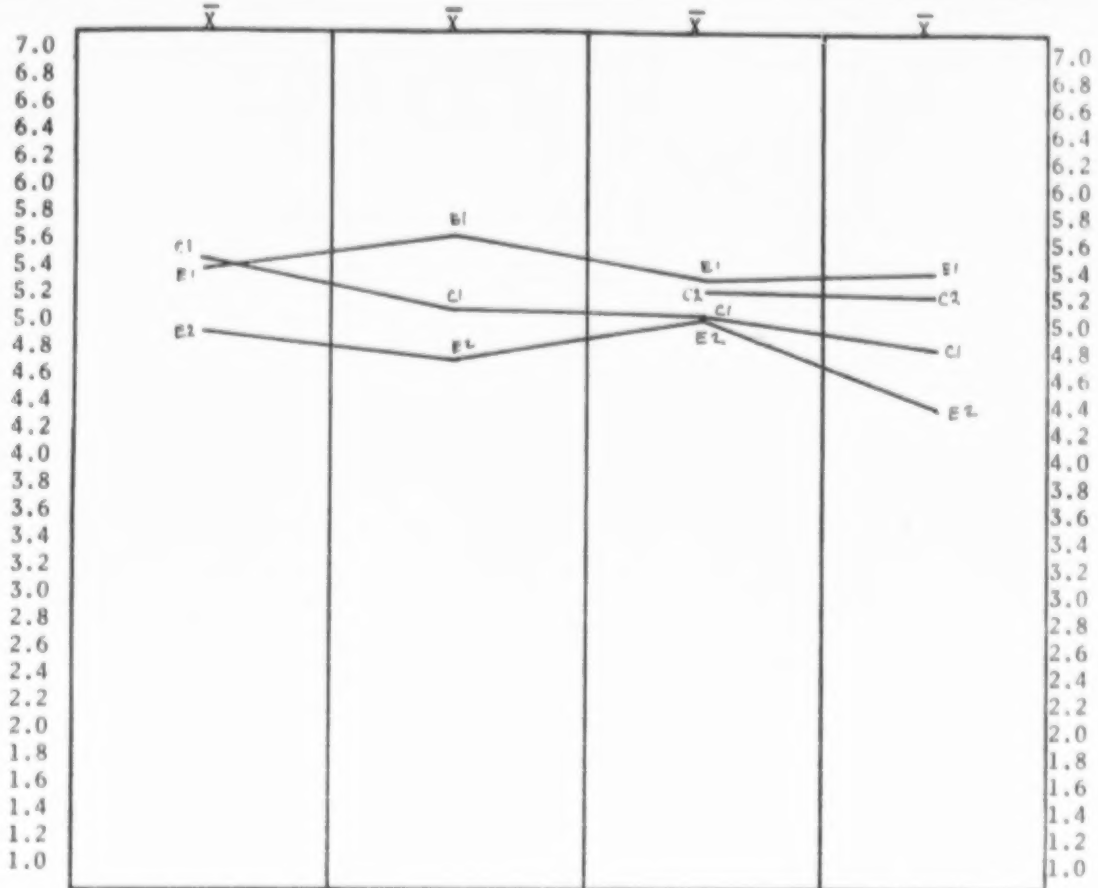


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED #1	39	6.051	0.999	73	6.137	1.045	68	5.970	1.184	39	5.666	1.382
Experimental SED #2	60	5.900	1.189	52	5.135	1.534	45	5.020	1.581	40	4.150	1.477
Control SED #1	66	5.712	1.274	61	4.836	1.675	67	5.223	1.515	61	4.983	1.454
Control SED #2							61	5.426	1.717	66	5.166	1.342
Total	165			186			241			206		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/	Col.	22.841	.001	0.541	NS	2.143	NS	8.430	.01
Control SED #1	Row	5.304	.05	38.695	.001	14.799	.001	7.658	.01
Experiment SED#2 W/	Col.	1.727	NS	0.424	NS	6.677	.01	45.758	.001
Control SED #1	Row	19.668	.001	0.053	NS	6.281	.05	2.965	NS
Experiment SED#1 W/	Col.					2.204	NS		
Control SED #2	Row					7.574	.01		
Experiment SED#2 W/	Col.					6.645	.01		
Control SED #2	Row					11.238	.001		

QUESTIONNAIRE DATA

Item 3 Higher management's reactions to the problems that reach them are fair.



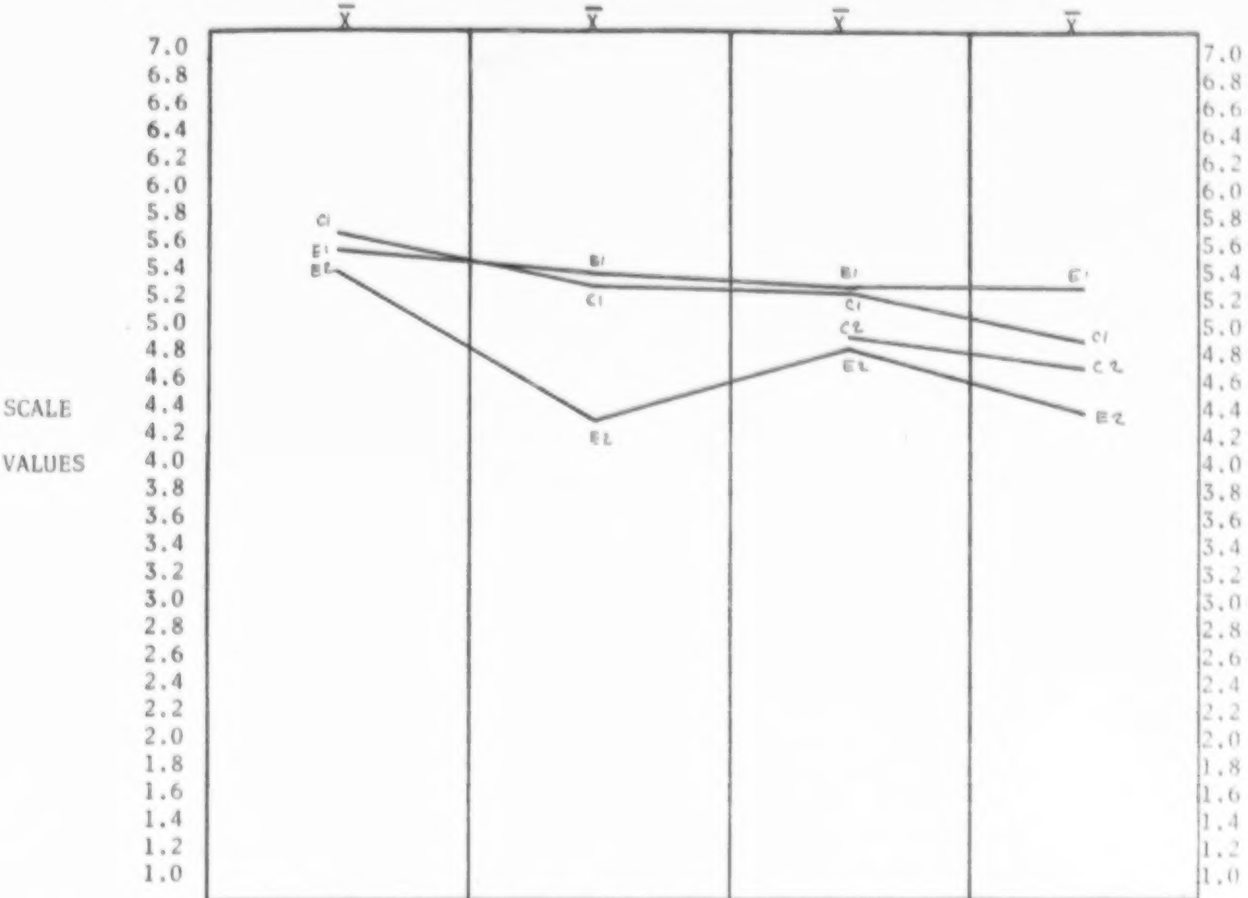
SCALE VALUES

	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	5.436	1.535	71	5.677	1.180	68	5.382	1.414	39	5.410	0.965
Experimental SED #2	60	4.950	1.512	49	4.673	1.420	45	5.066	1.420	38	4.421	1.463
Control SED #1	65	5.492	1.002	58	5.138	1.420	67	5.089	1.287	61	4.868	1.419
Control SED #2							61	5.287	1.362	65	5.258	1.369
Total	164			178			241			203		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	0.113	NS	1.416	NS	2.805	NS	3.707	NS
	Row	2.005	NS	5.819	.05	5.704	.05	2.013	NS
Experiment SED#2 W/ Control SED #1	Col.	8.072	.01	0.633	NS	4.882	.05	9.847	.01
	Row	3.170	NS	2.604	NS	1.441	NS	7.284	.01
Experiment SED#1 W/ Control SED #2	Col.					0.712	NS		
	Row					1.710	NS		
Experiment SED#2 W/ Control SED #2	Col.					6.054	.05		
	Row					4.509	.05		

QUESTIONNAIRE DATA

Item 4 My manager knows and understands the problems I face.

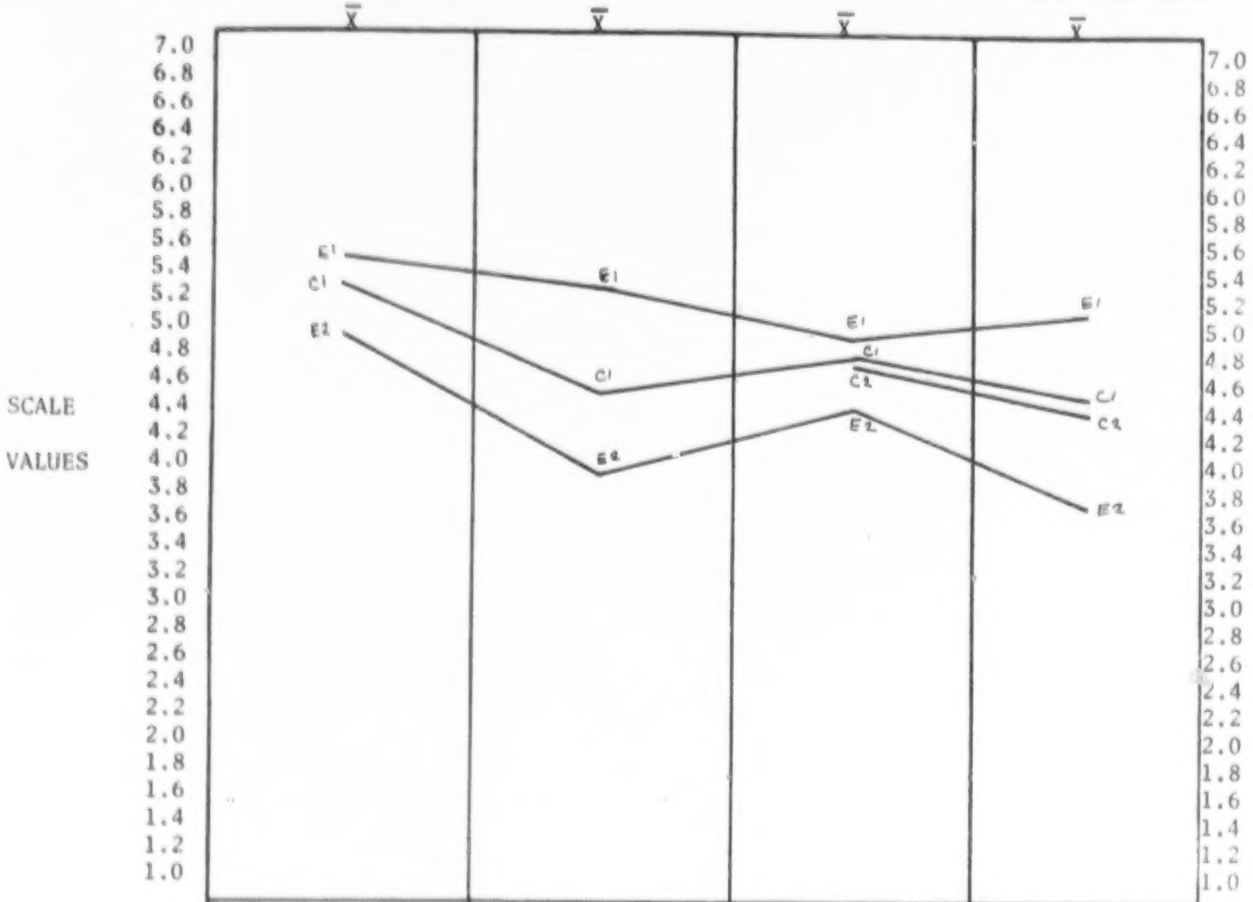


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	5.589	0.992	73	5.410	1.278	68	5.338	1.322	39	5.333	1.131
Experimental SED #2	59	5.423	1.392	52	4.365	1.559	45	4.888	1.417	40	4.425	1.375
Control SED #1	65	5.707	1.377	64	5.343	1.555	67	5.298	1.279	60	4.966	1.413
Control SED #2							61	4.950	1.736	66	4.742	1.384
Total	163			189			241			205		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	2.313	NS	0.122	NS	0.925	NS	7.299	.01
	Row	0.020	NS	0.104	NS	1.347	NS	0.453	NS
Experiment SED#2 W/ Control SED #1	Col.	13.922	.001	1.504	NS	4.304	.05	21.144	.001
	Row	10.967	.001	12.671	.001	6.152	.05	4.762	.05
Experiment SED#1 W/ Control SED #2	Col.					0.308	NS		
	Row					6.496	.05		
Experiment SED#2 W/ Control SED #2	Col.					7.934	NS		
	Row					0.750	NS		

QUESTIONNAIRE DATA

Item 5 My manager recognizes when a problem is developing and does something constructive about it.

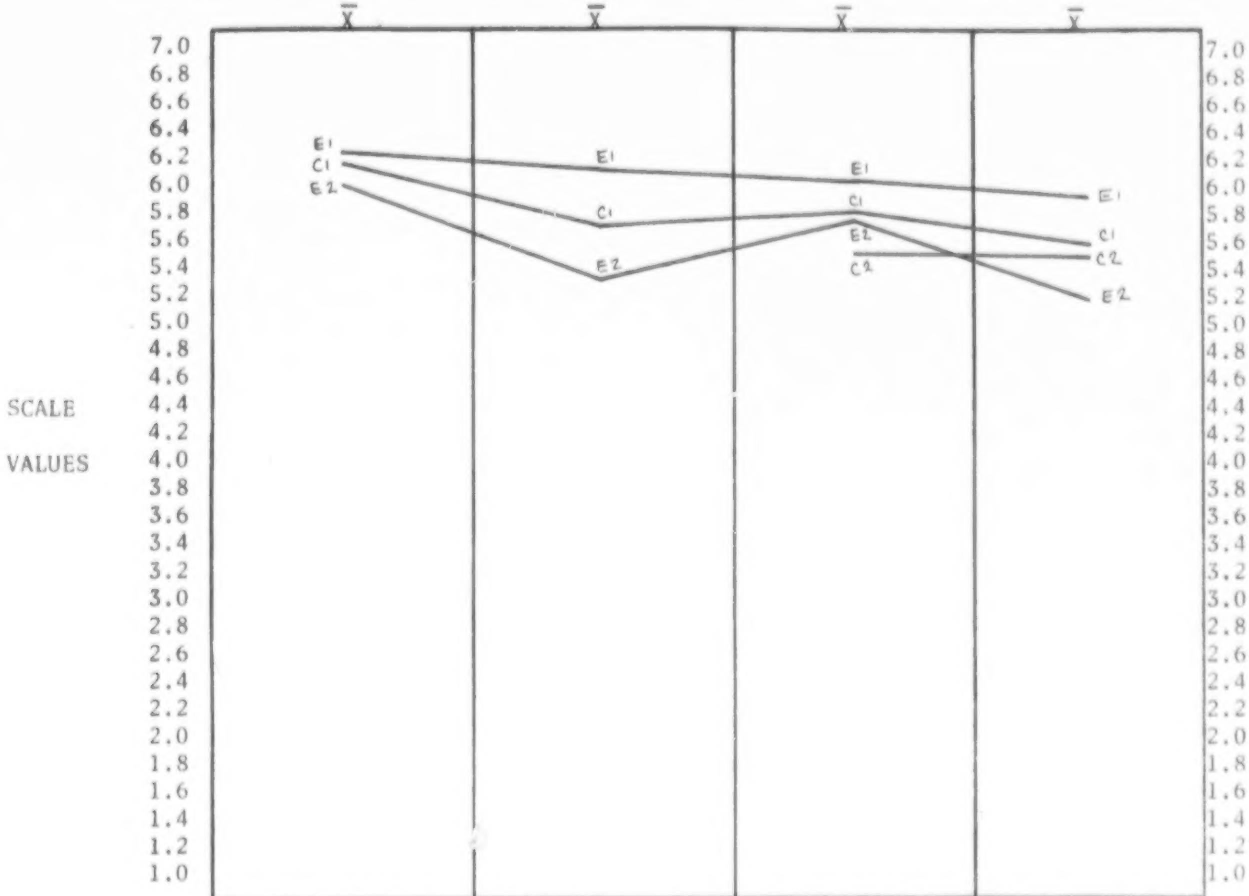


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	5.538	1.166	73	5.315	1.091	68	4.970	1.525	39	5.179	1.315
Experimental SED #2	60	4.966	1.495	52	3.980	1.577	45	4.466	1.618	40	3.725	1.535
Control SED #1	65	5.338	1.361	64	4.578	1.660	67	4.850	1.539	60	4.550	1.598
Control SED #2							61	4.786	1.674	66	4.424	1.559
Total	164			189			241			205		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/	Col.	7.588	.01	0.041	NS	0.050	NS	8.127	.01
Control SED #1	Row	6.884	.01	5.835	.05	3.393	NS	4.247	.05
Experiment SED#2 W/	Col.	19.600	.01	3.127	NS	5.573	.05	25.046	.001
Control SED #1	Row	6.037	.05	5.235	.05	7.498	.01	8.704	.01
Experiment SED#1 W/	Col.					0.137	NS		
Control SED #2	Row					5.146	.05		
Experiment SED#2 W/	Col.					6.035	.05		
Control SED #2	Row					5.144	.05		

QUESTIONNAIRE DATA

Item 6 My manager shows confidence and trust in me.



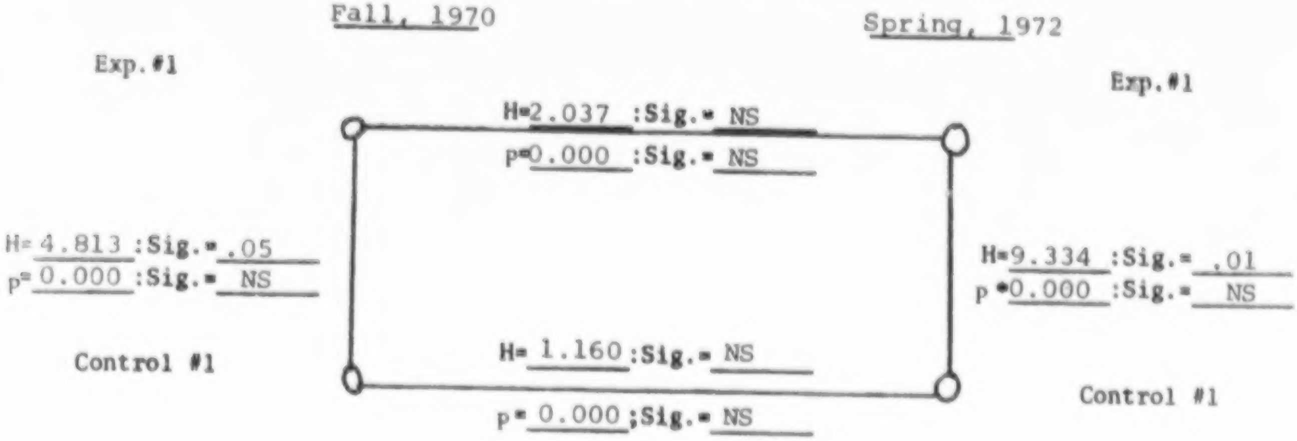
	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED #1	39	6.282	0.759	73	6.178	1.109	68	6.058	0.975	40	5.975	1.187
Experimental SED #2	60	6.050	1.213	52	5.326	1.424	45	5.800	0.990	40	5.225	1.576
Control SED #1	65	6.200	1.018	62	5.758	1.237	67	5.850	1.018	61	5.622	1.258
Control SED #2							61	5.557	1.466	64	5.531	1.167
Total	164			187			241			205		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	3.656	NS	0.010	NS	1.126	NS	8.022	.01
	Row	3.092	NS	5.614	NS	3.639	NS	1.934	NS
Experiment SED#2 W/ Control SED #1	Col.	13.516	.001	3.176	NS	5.659	.05	17.244	.001
	Row	3.363	NS	2.304	NS	1.768	NS	2.634	NS
Experiment SED#1 W/ Control SED #2	Col.					8.547	NS		
	Row					0.115	.01		
Experiment SED#2 W/ Control SED #2	Col.					2.644	NS		
	Row					0.029	NS		

CONTENT ANALYSIS DATA

Item 1 : Involvement in Decision-Making in the State Department.

SCHEMATIC PRESENTATION OF ANALYSIS



Fall, 1970

Spring, 1972

Exp.#1

Exp.#1

H=2.037 :Sig.= NS
p=0.000 :Sig.= NS

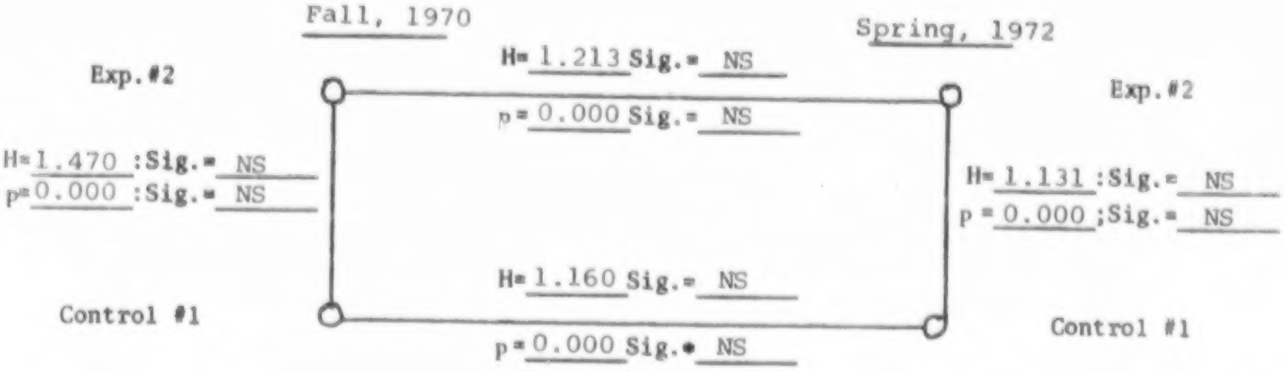
H=4.813 :Sig.= .05
p=0.000 :Sig.= NS

H=9.334 :Sig.= .01
p =0.000 :Sig.= NS

Control #1

H= 1.160 :Sig.= NS
p= 0.000 ;Sig.= NS

Control #1



Fall, 1970

Spring, 1972

Exp.#2

H= 1.213 Sig.= NS
p = 0.000 Sig.= NS

Exp.#2

H=1.470 :Sig.= NS
p=0.000 :Sig.= NS

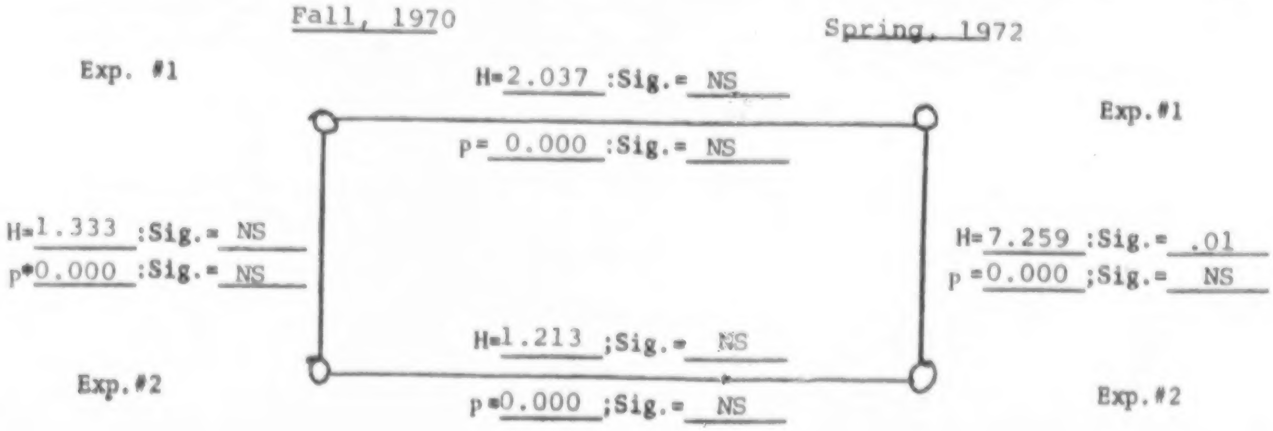
H= 1.131 :Sig.= NS
p = 0.000 ;Sig.= NS

H= 1.160 Sig.= NS

Control #1

p = 0.000 Sig.= NS

Control #1



Fall, 1970

Spring, 1972

Exp. #1

H=2.037 :Sig.= NS
p= 0.000 :Sig.= NS

Exp.#1

H=1.333 :Sig.= NS
p=0.000 :Sig.= NS

H=7.259 :Sig.= .01
p =0.000 ;Sig.= NS

H=1.213 ;Sig.= NS

Exp.#2

p =0.000 ;Sig.= NS

Exp.#2

Item 1 : Involvement in Decision-Making in the State Department.

Fall, 1970	N	**Kruskal-Wallis One-Way Analysis of Variance**	**Binominal Test of Proportions**
Experiment#1 & **Control #1**	12 12	**H=** 4.813 **Signif.=** .05	P = 0.000 **Signif.=** NS
Experiment#2 & **Control #1**	12 12	**H=** 1.470 **Signif.=** NS	p = 0.000 **Signif.=** NS
Experiment#1 & **Experiment#2**	12 12	**H=** 1.333 **Signif.=** NS	p= 0.000 **Signif.=** NS
Spring, 1972			
Experiment#1 & **Control #1**	8 11	**H=** 9.334 **Signif.=** .01	P = 0.000 **Signif.=** NS
Experiment#2 & **Control #1**	9 11	**H=** 1.131 **Signif.=** NS	P = 0.000 **Signif.=** NS
Experiment#1 & **Experiment#2**	8 9	**H=** 7.259 **Signif.=** .01	P= 0.000 **Signif.=** NS
Fall, 1970 to Spring, 1972			
Experiment #1 & **Experiment #1**	12 8	**H=** 2.037 **Signif.=** NS	p= 0.000 **Signif.=** NS
Experiment #2 & **Experiment #2**	12 9	**H=** 1.213 **Signif.=** NS	p= 0.000 **Signif.=** NS
Control#1 & **Control#1**	12 11	**H=** 1.160 **Signif.=** NS	P = 0.000 **Signif.=** NS

CONTENT ANALYSIS DATA

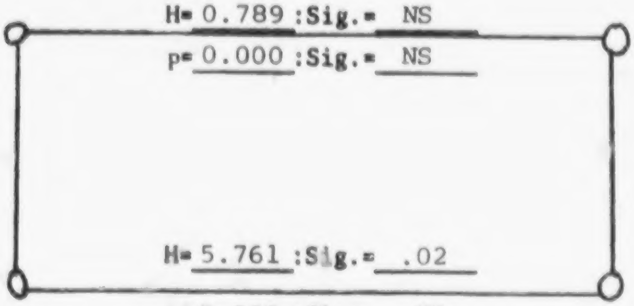
Item 2 : Quality of Decision-Making in the State Department.

SCHEMATIC PRESENTATION OF ANALYSIS

Fall, 1970 Spring, 1972

Exp.#1 **Exp.#1**

H= 0.789 :Sig.= NS
p= 0.000 :Sig.= NS



H=1.141 :Sig.= NS
p=0.000 :Sig.= NS

H= 4.854 :Sig.= .05
p = 0.000 :Sig.= NS

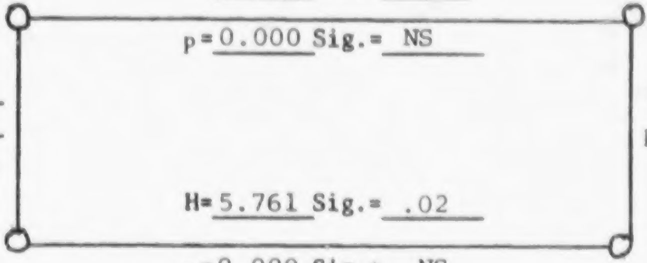
H= 5.761 :Sig.= .02
p = 0.000 ;Sig.= NS

Control #1 **Control #1**

Fall, 1970 Spring, 1972

Exp.#2 **Exp.#2**

H= 1.823 Sig.= NS
p = 0.000 Sig.= NS



H=6.901 :Sig.= .01
p=0.000 :Sig.= NS

H= 0.763 :Sig.= NS
p = 0.000 ;Sig.= NS

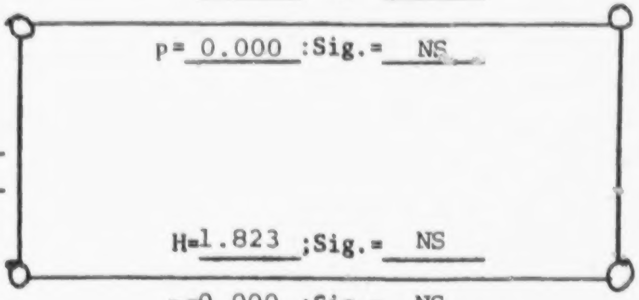
H= 5.761 Sig.= .02
p = 0.000 Sig.= NS

Control #1 **Control #1**

Fall, 1970 Spring, 1972

Exp. #1 **Exp.#1**

H=0.789 :Sig.= NS
p= 0.000 :Sig.= NS



H=1.763 :Sig.= NS
p=0.000 :Sig.= NS

H=7.253 :Sig.= .01
p =0.000 ;Sig.= NS

H=1.823 ;Sig.= NS
p =0.000 ;Sig.= NS

Exp.#2 **Exp.#2**

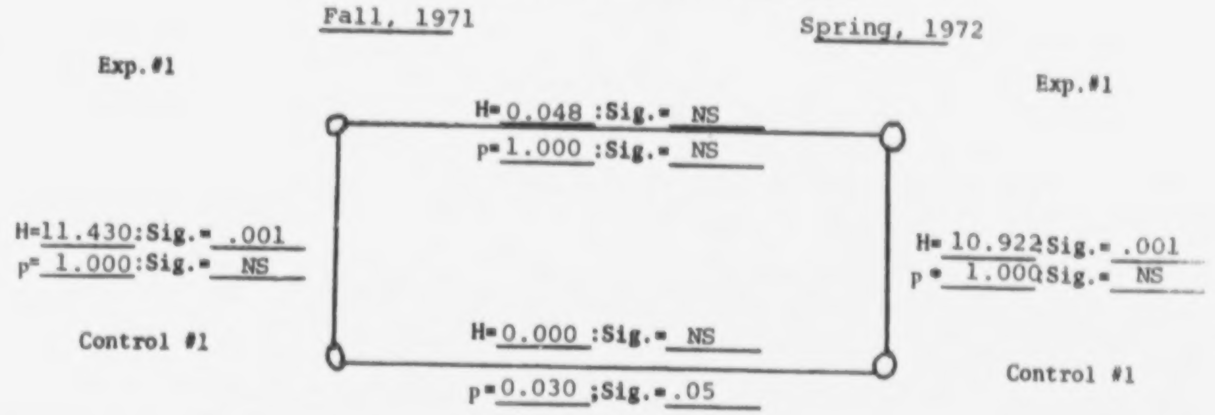
Item 2 : Quality of Decision-Making in State Department.

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binominal Test of Proportions
Experiment#1 & Control #1	12 12	H= 1.141 Signif.= NS	P = 0.000 Signif.= NS
Experiment#2 & Control #1	12 12	H= 6.901 Signif.= .01	p = 0.000 Signif.= NS
Experiment#1 & Experiment#2	12 12	H= 1.763 Signif.= NS	p= 0.000 Signif.= NS
Spring, 1972			
Experiment#1 & Control #1	9 11	H= 4.854 Signif.= .05	P = 0.000 Signif.= NS
Experiment#2 & Control #1	9 11	H= 0.763 Signif.= NS	P = 0.000 Signif.= NS
Experiment#1 & Experiment#2	9 9	H= 7.253 Signif.= .01	P= 0.000 Signif.= NS
Fall, 1970 to Spring, 1972			
Experiment #1 & Experiment #1	12 9	H=0.789 Signif.= NS	p= 0.000 Signif.= NS
Experiment #2 & Experiment #2	12 9	H=1.823 Signif.= NS	p= 0.000 Signif= NS
Control#1 & Control#1	12 11	H=5.761 Signif.= .02	P = 0.000 Signif.= NS

CONTENT ANALYSIS DATA

Item 3 : Influence of Planning on Decision-Making Process.

SCHEMATIC PRESENTATION OF ANALYSIS



Fall, 1971

Spring, 1972

Exp.#1

H=0.048 :Sig.= NS

p=1.000 :Sig.= NS

Exp.#1

H=11.430:Sig.= .001

p=1.000:Sig.= NS

H= 10.922 Sig.= .001

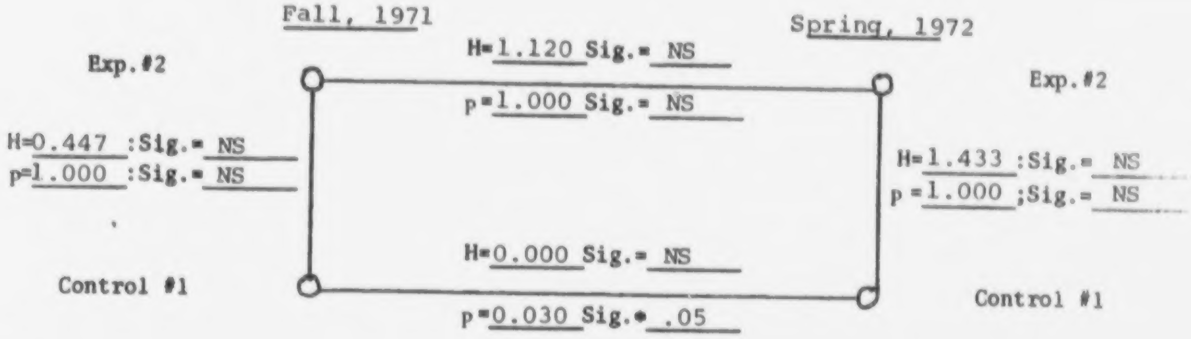
p = 1.000 Sig.= NS

Control #1

H=0.000 :Sig.= NS

p=0.030 ;Sig.= .05

Control #1



Fall, 1971

Spring, 1972

Exp.#2

H=1.120 Sig.= NS

p=1.000 Sig.= NS

Exp.#2

H=0.447 :Sig.= NS

p=1.000 :Sig.= NS

H=1.433 :Sig.= NS

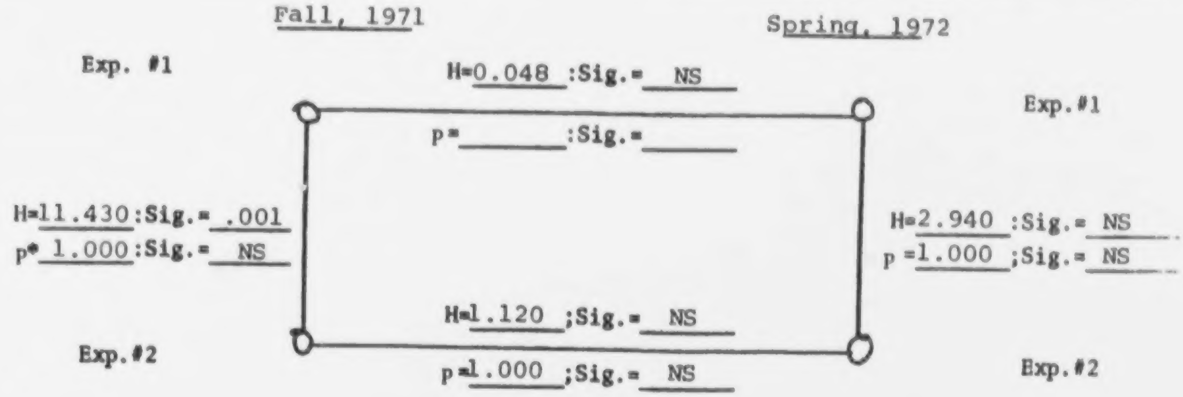
p =1.000 ;Sig.= NS

Control #1

H=0.000 Sig.= NS

p=0.030 Sig.= .05

Control #1



Fall, 1971

Spring, 1972

Exp. #1

H=0.048 :Sig.= NS

p= :Sig.=

Exp.#1

H=11.430:Sig.= .001

p= 1.000:Sig.= NS

H=2.940 :Sig.= NS

p =1.000 ;Sig.= NS

H=1.120 ;Sig.= NS

Exp.#2

p =1.000 ;Sig.= NS

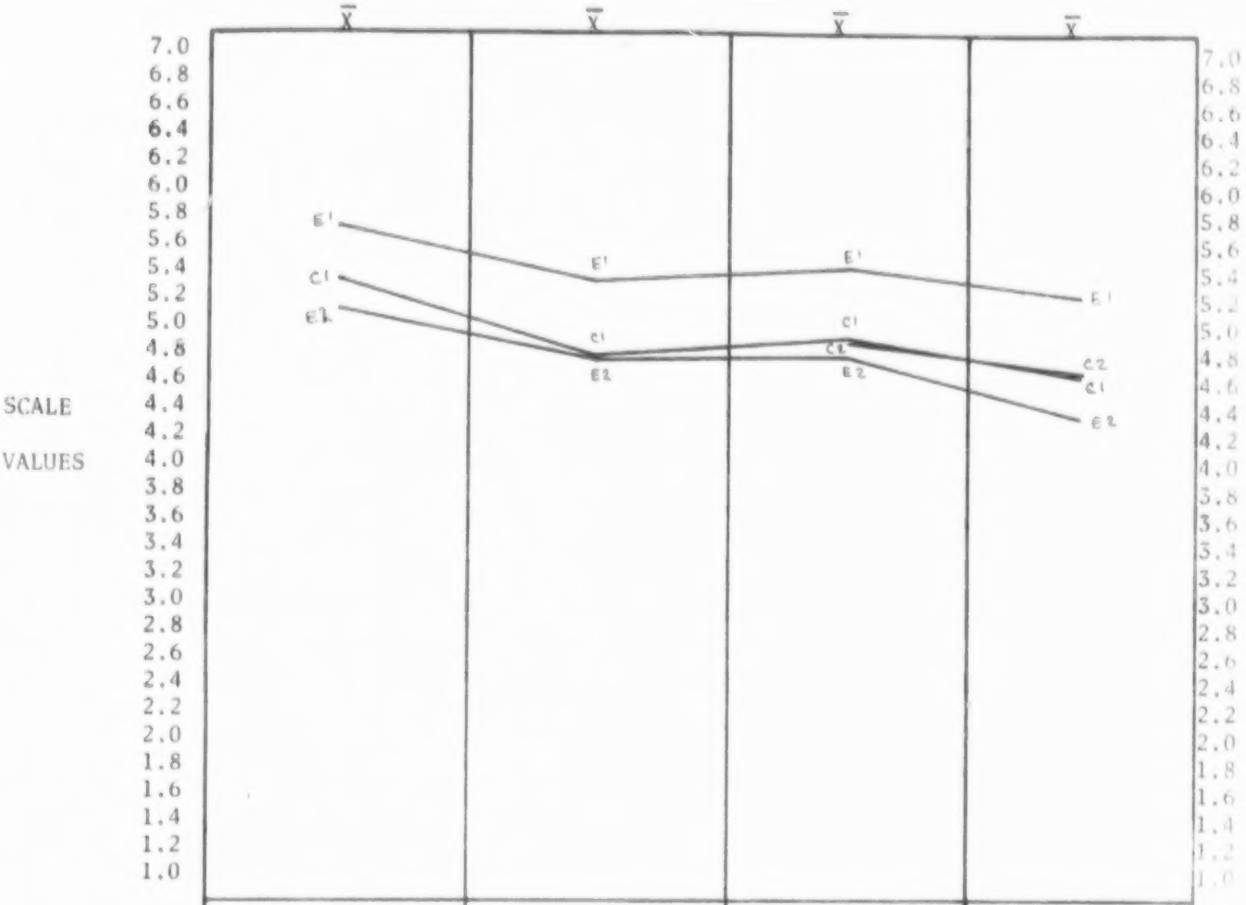
Exp.#2

Item 3 : Influence of Planning on Decision-Making Process.

Fall, 1971	N	**Kruskal-Wallis One-Way Analysis of Variance**	**Binominal Test of Proportions**
Experiment#1 & **Control #1**	9 11	**H=**11.430 **Signif.=** .001	P =1.000 Signif.= NS
Experiment#2 & Control #1	10 11	**H=** 0.447 **Signif.=** NS	P =1.000 Signif.= NS
Experiment#1 & Experiment#2	9 11	**H=**11.430 **Signif.=** .001	P= 1.000 Signif.= NS
Spring, 1972			
Experiment#1 & Control #1	9 11	**H=**10.422 **Signif.=** .001	P =1.000 Signif.= NS
Experiment#2 & Control #1	10 11	H= 1.433 Signif.= NS	P =1.000 Signif.= NS
Experiment#1 & Experiment#2	9 10	H= 2.940 Signif.= NS	P =1.000 Signif.= NS
Fall, 1971 to Spring, 1972			
Experiment #1 & **Experiment #1**	9 9	**H=** 0.048 **Signif.=** NS	P= 1.000 Signif.= NS
Experiment #2 & **Experiment #2**	10 10	**H=** 1.120 **Signif.=** NS	P= 1.000 Signif.= NS
Control#1 & **Control#1**	8 10	**H=**0.000 **Signif.=** NS	P =0.030 Signif.= .05

QUESTIONNAIRE DATA

Item 4 The people I work with participate appropriately in setting the goals of our work.

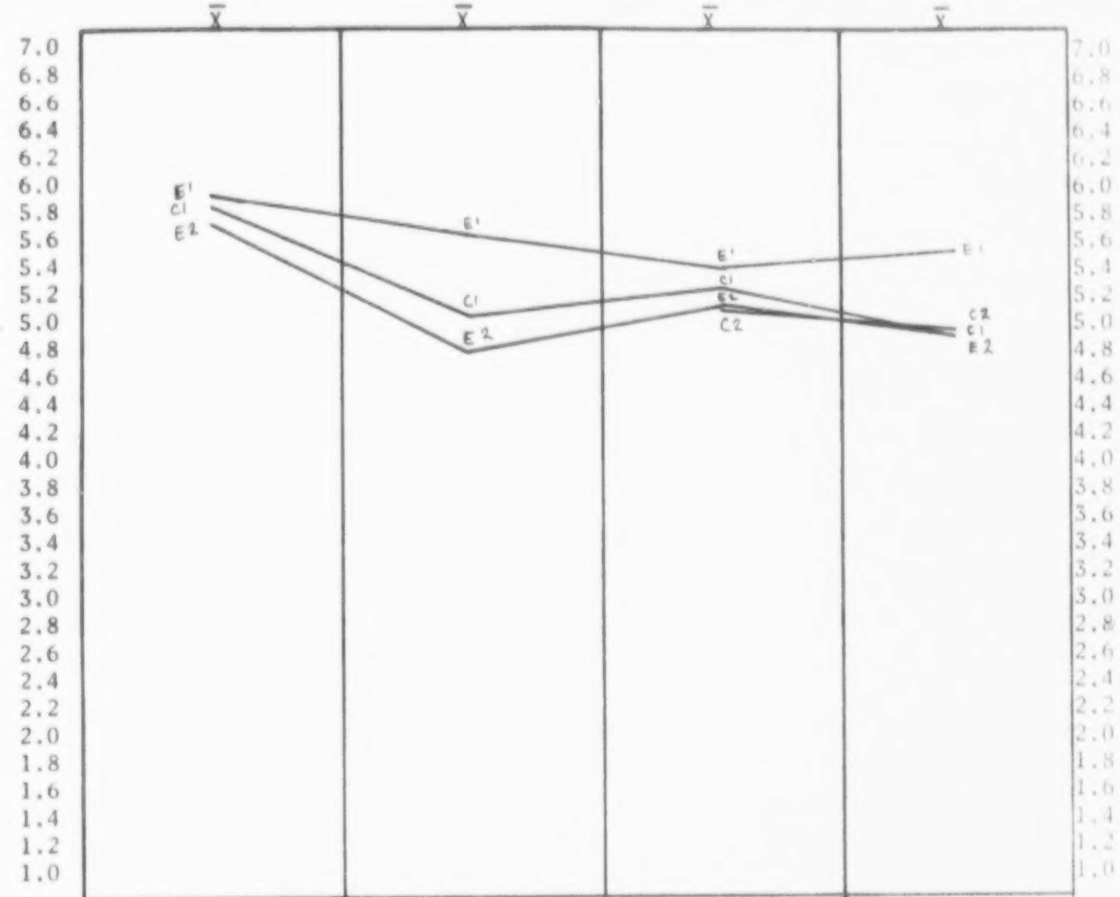


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	5.769	0.931	72	5.375	1.305	68	5.485	1.099	40	5.250	1.163
Experimental SED #2	60	5.167	1.460	51	4.804	1.342	45	4.822	1.481	39	4.384	1.515
Control SED #1	66	5.394	1.288	60	4.817	1.568	67	4.970	1.313	59	4.661	1.372
Control SED #2							61	4.918	1.429	66	4.696	1.300
Total	165			183			241			204		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	7.002	.01	0.700	NS	2.708	NS	12.471	.001
	Row	7.582	.01	1.138	.001	11.139	.001	7.653	.01
Experiment SED#2 W/ Control SED #1	Col.	0.844	NS	0.215	NS	3.539	NS	13.495	.001
	Row	5.154	.05	0.158	NS	1.142	NS	2.412	NS
Experiment SED#1 W/ Control SED #2	Col.					1.870	NS		
	Row					11.270	.001		
Experiment SED#2 W/ Control SED #2	Col.					2.716	NS		
	Row					1.043	NS		

QUESTIONNAIRE DATA

Item 5 Iam appropriately involved in decisions affecting my work.

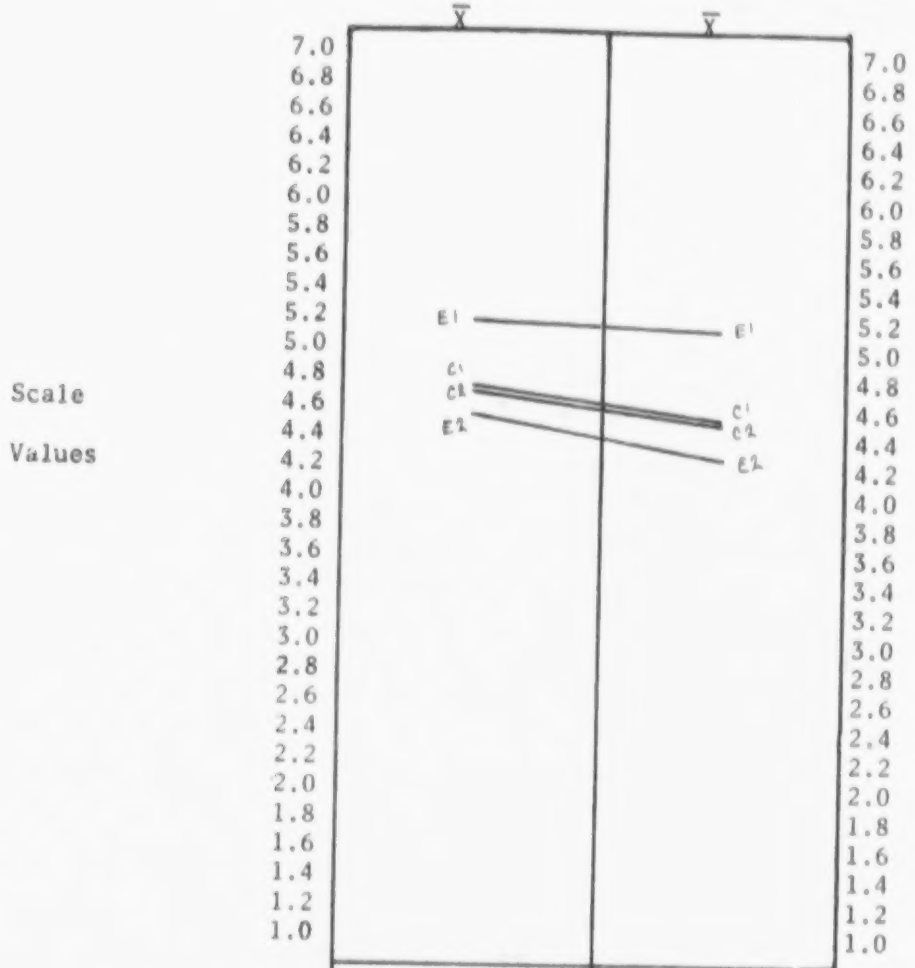


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experimental SED #1	39	5.949	0.887	73	5.699	1.298	68	5.441	1.428	40	5.575	0.984
Experimental SED #2	59	5.661	1.385	52	4.808	1.456	45	5.177	1.336	40	4.950	1.466
Control SED #1	66	5.879	1.117	61	5.082	1.452	67	5.298	1.314	61	4.950	1.553
Control SED #2							61	5.147	1.525	66	4.984	1.430
Total	164			186			241			207		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	4.355	.05	0.012	NS	0.344	NS	14.408	.001
	Row	10.125	.01	5.287	.05	4.431	.05	3.858	.05
Experiment SED#2 W/ Control SED #1	Col.	1.959	NS	2.526	NS	2.091	NS	19.479	.001
	Row	22.038	.001	1.108	NS	0.933	NS	0.384	NS
Experiment SED#1 W/ Control SED #2	Col.					0.006	NS		
	Row					5.662	.05		
Experiment SED#2 W/ Control SED #2	Col.					0.925	NS		
	Row					0.000	NS		

QUESTIONNAIRE DATA

Item 6 I can influence the goals, methods, and activities of my organization.



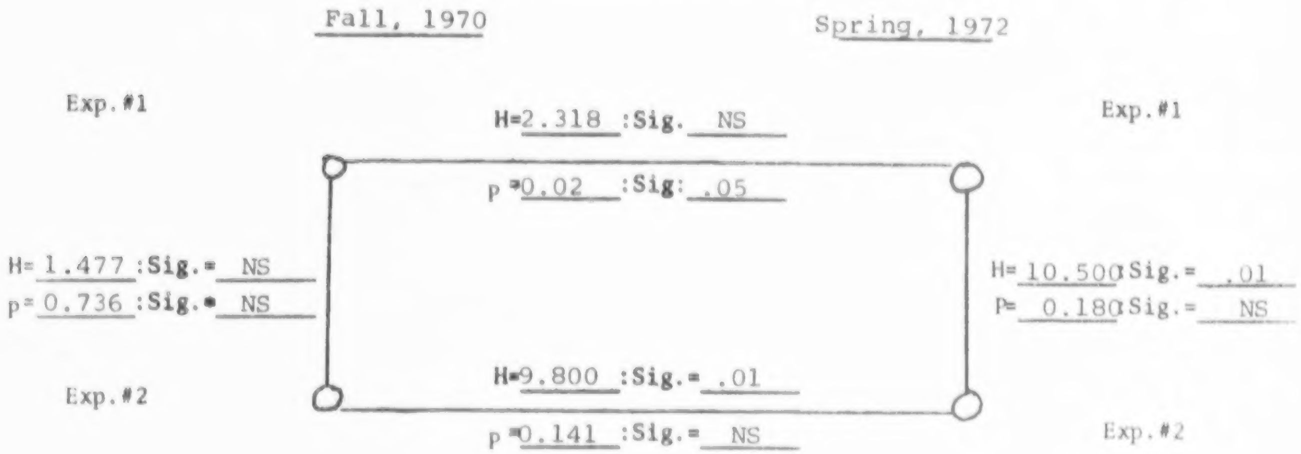
	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental SED#1	68	5.220	1.433	40	5.175	1.009
Experimental SED#2	45	4.577	1.469	40	4.300	1.471
Control SED#1	67	4.731	1.343	61	4.557	1.554
Control SED#2	61	4.770	1.531	66	4.545	1.458
Total	241			207		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1	Col.	0.356	NS
W/Control SED#1	Row	9.060	.01
Experiment SED#2	Col.	1.224	NS
W/Control SED#1	Row	1.013	NS
Experiment SED#1	Col.	0.520	NS
W/Control SED#2	Row	8.276	.01
Experiment SED#2	Col.	1.807	NS
W/Control SED#2	Row	0.972	NS

CONTENT ANALYSIS DATA

Item 1 :Promote Cooperative Team Work.

SCHEMATIC PRESENTATION OF ANALYSIS

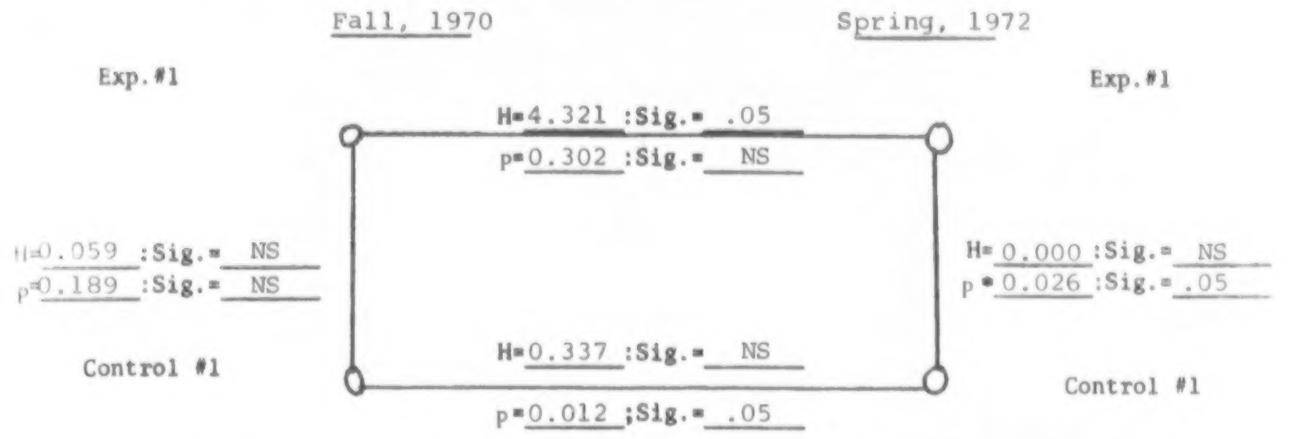

Fall, 1970
Spring, 1972
Exp.#1
H=2.318 :Sig. NS
Exp.#1
p =0.02 :Sig: .05
H= 1.477 :Sig.= NS
p= 0.736 :Sig.= NS
H= 10.500 :Sig.= .01
P= 0.180 :Sig.= NS
Exp.#2
H=9.800 :Sig.= .01
p =0.141 :Sig.= NS
Exp.#2

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	8 7	H=1.477 Sig.= NS	P =0.736 Sig. NS
Spring, 1972			
Experiment #1 & Experiment #2	8 7	H=10.500 Sig.= .01	p =0.180 Sig.= NS
Fall, 1970 to Spring, 1972			
Experiment #1 & Experiment #1	8 8	H=2.318 Sig.= NS	p = 0.02 Sig.= .05
Experiment #2 & xperiment #2	7 7	H=9.800 Sig.= .01	p =0.141 Sig.= NS

CONTENT ANALYSIS DATA

Item 2 : Amount of Cooperative Teamwork Present.

SCHEMATIC PRESENTATION OF ANALYSIS


Fall, 1970

Spring, 1972

Exp.#1

Exp.#1

H=4.321 :Sig.= .05
p=0.302 :Sig.= NS

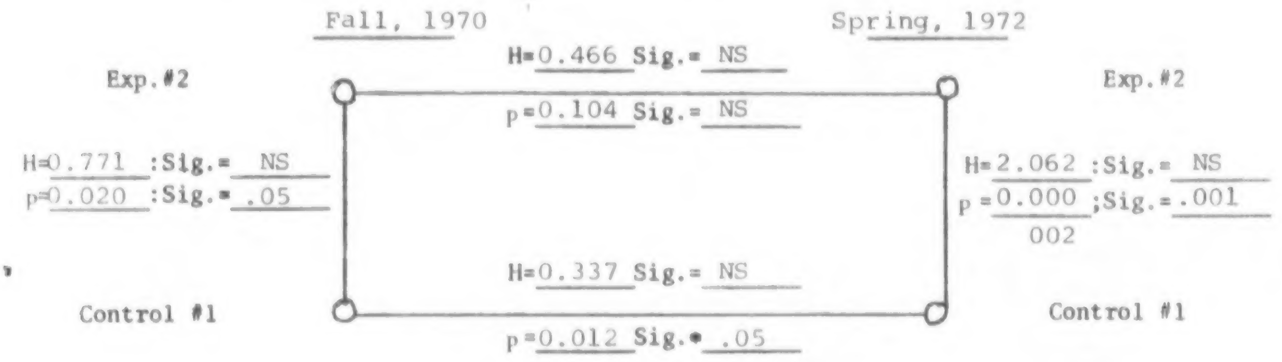
H=0.059 :Sig.= NS
p=0.189 :Sig.= NS

H= 0.000 :Sig.= NS
p = 0.026 :Sig.= .05

H=0.337 :Sig.= NS
p=0.012 ;Sig.= .05

Control #1

Control #1


Fall, 1970

Spring, 1972

H=0.466 Sig.= NS
p=0.104 Sig.= NS

Exp.#2

Exp.#2

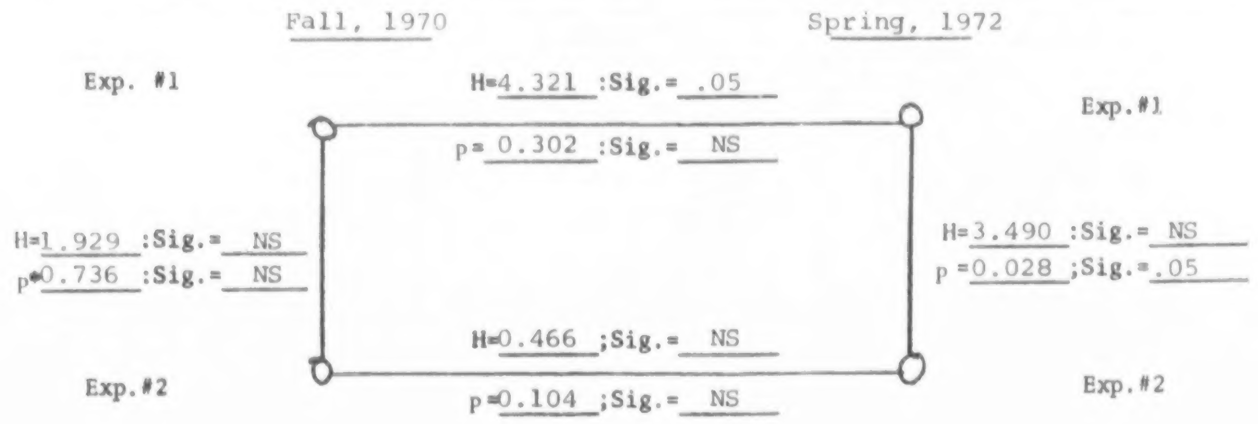
H=0.771 :Sig.= NS
p=0.020 :Sig.= .05

H=2.062 :Sig.= NS
p =0.000 ;Sig.= .001
002

H=0.337 Sig.= NS
p=0.012 Sig.= .05

Control #1

Control #1


Fall, 1970

Spring, 1972

Exp. #1

Exp.#1

H=4.321 :Sig.= .05
p= 0.302 :Sig.= NS

H=1.929 :Sig.= NS
p=0.736 :Sig.= NS

H=3.490 :Sig.= NS
p =0.028 ;Sig.= .05

H=0.466 ;Sig.= NS
p=0.104 ;Sig.= NS

Exp.#2

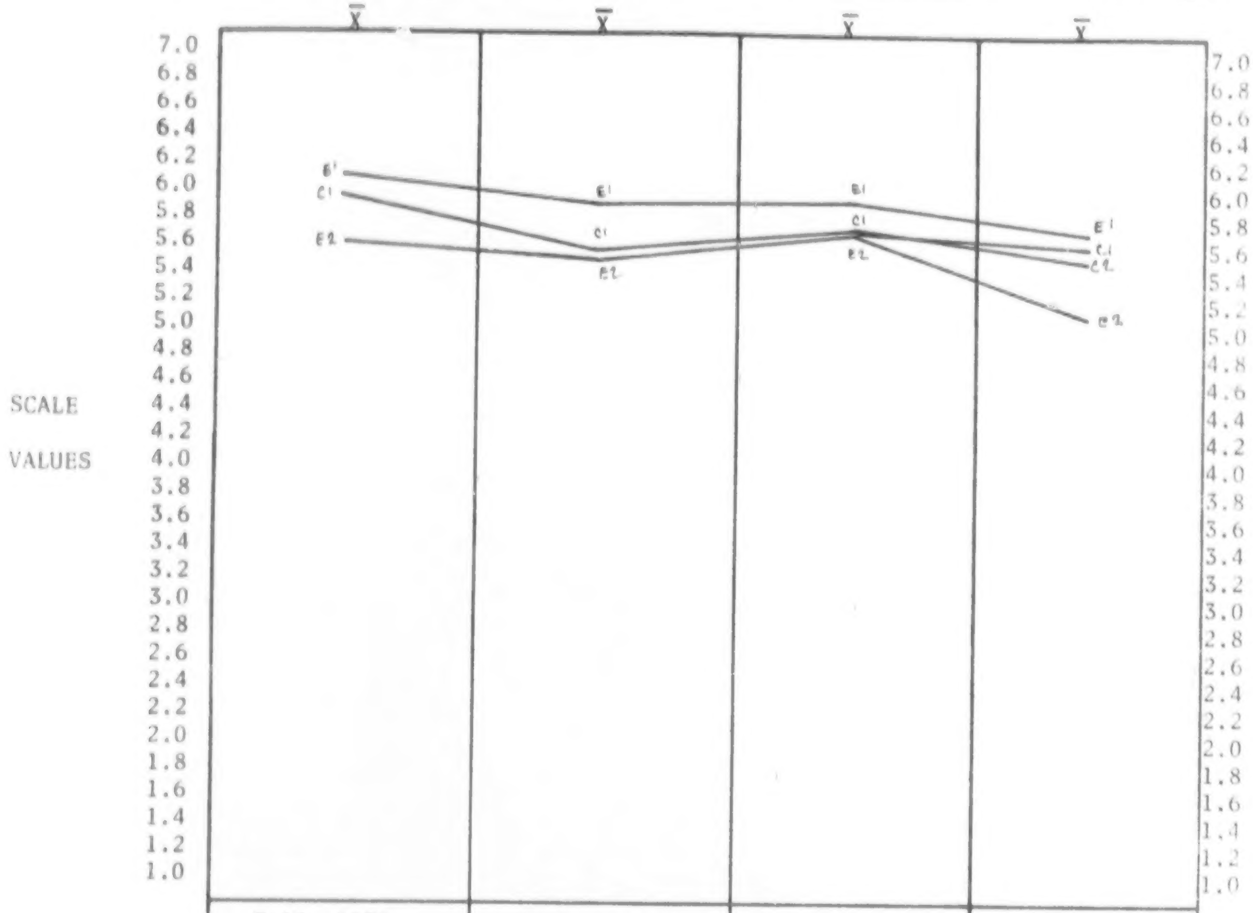
Exp.#2

Item 2 : Amount of Cooperative Teamwork Present.

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binominal Test of Proportions
Experiment#1 & Control #1	7 5	H=0.059 Signif.= NS	P =0.189 Signif.= NS
Experiment#2 & Control #1	8 5	H=0.771 Signif.= NS	p = 0.020 Signif.= .05
Experiment#1 & Experiment#2	7 8	H= 1.020 Signif.= NS	p=0.736 Signif.= NS
Spring, 1972			
Experiment#1 & Control #1	4 2	H= 0.000 Signif.= NS	P =0.026 Signif.= .05
Experiment#2 & Control #1	8 2	H= 2.062 Signif.= NS	P =0.000002 Signif.= .001
Experiment#1 & Experiment#2	4 8	H= 3.490 Signif.= NS	P =0.028 Signif.= .05
Fall 1970 to Spring, 1972			
Experiment #1 & Experiment #1	7 4	H=4.321 Signif.= .05	p=0.302 Signif.= NS
Experiment #2 & Experiment #2	8 8	H=0.466 Signif.= NS	p= 0.104 Signif= NS
Control#1 & Control#1	5 2	H=0.337 Signif.= NS	P =0.012 Signif.= .05

QUESTIONNAIRE DATA

Item 3 My group works hard to achieve its goals.

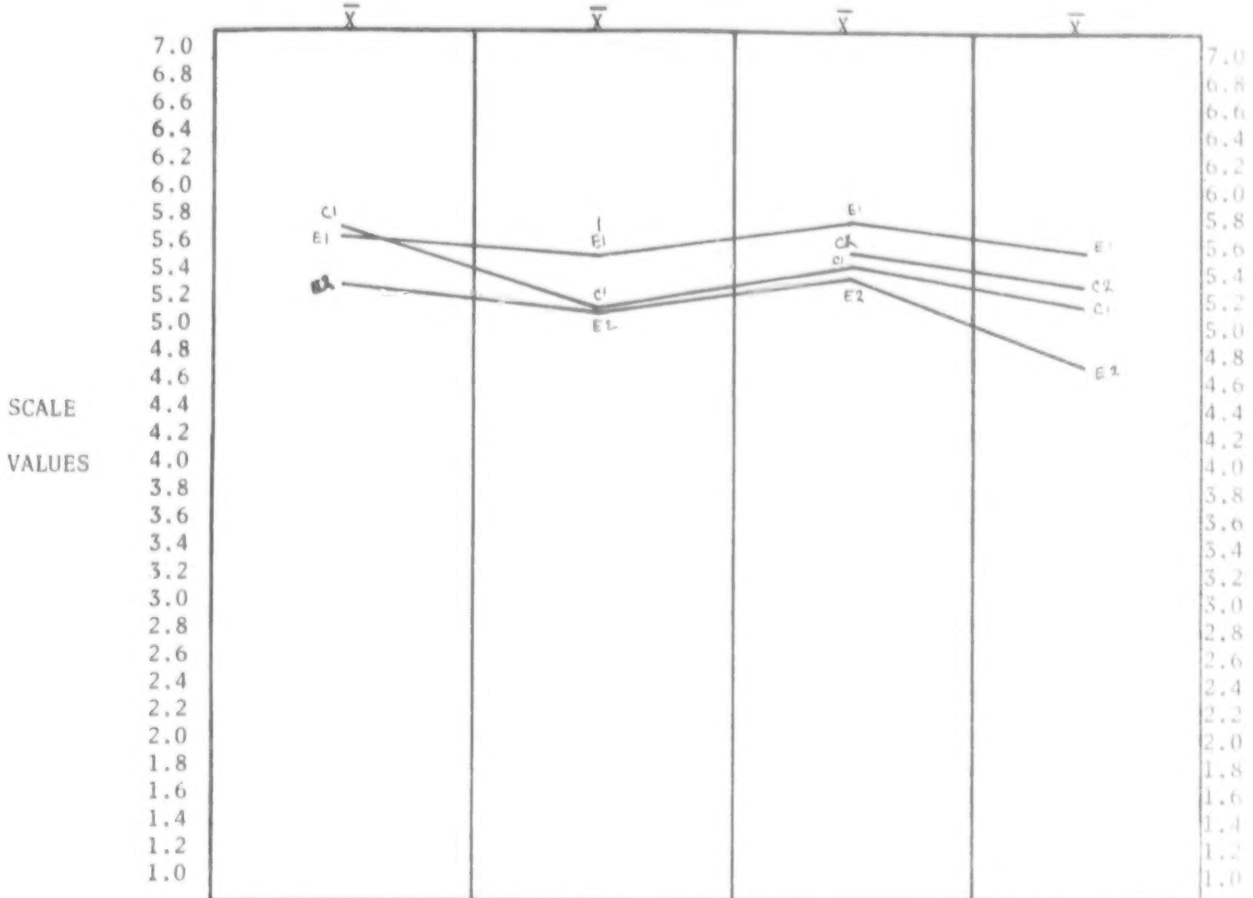


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	6.128	0.656	73	5.932	0.855	68	5.955	1.125	40	5.675	1.071
Experimental SED #2	60	5.634	1.149	52	5.538	1.019	45	5.711	1.057	39	5.179	1.048
Control SED #1	66	6.091	0.956	60	5.600	1.417	67	5.776	1.112	60	5.533	1.185
Control SED #2							61	5.721	1.127	66	5.651	0.952
Total	165			185			241			205		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	1.812	NS	0.436	NS	3.019	NS	12.175	.001
	Row	6.298	.05	3.213	NS	1.137	NS	0.374	NS
Experiment SED#2 W/ Control SED #1	Col.	3.016	NS	1.101	NS	6.113	.05	11.581	.001
	Row	3.841	.05	0.214	NS	1.788	NS	7.459	.01
Experiment SED#1 W/ Control SED #2	Col.					1.505	NS		
	Row					0.815	NS		
Experiment SED#2 W/ Control SED #2	Col.					4.167	.05		
	Row					2.679	NS		

QUESTIONNAIRE DATA

Item 4 My work group understands what we are trying to achieve.

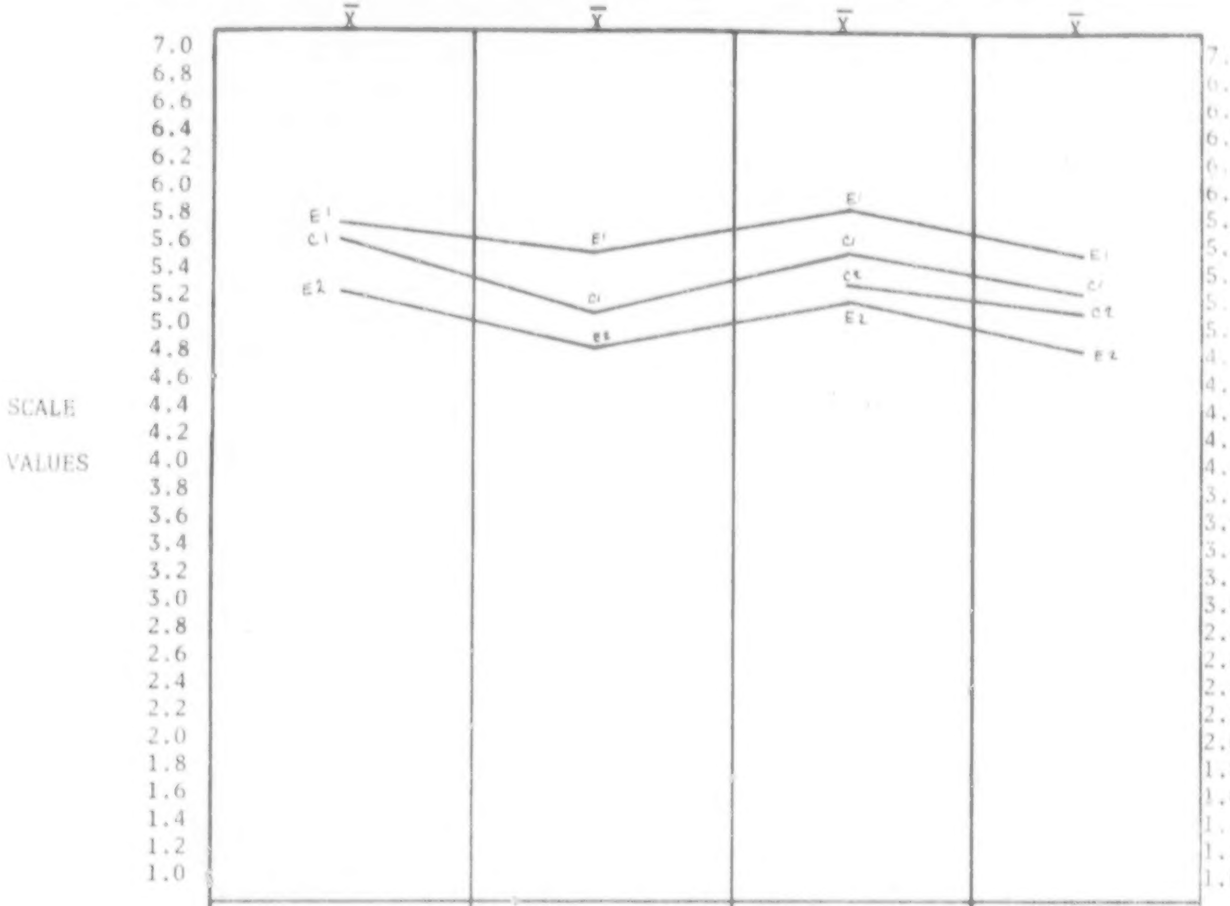


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	5.667	0.898	73	5.562	0.928	68	5.808	1.136	40	5.600	1.172
Experimental SED #2	60	5.317	1.172	49	5.143	1.208	45	5.400	1.194	39	4.769	1.180
Control SED #1	66	5.727	1.075	61	5.164	1.306	67	5.492	1.064	61	5.196	1.166
Control SED #2							61	5.573	1.296	66	5.363	1.223
Total	165			183			241			206		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/	Col.	1.395	NS	4.384	.05	2.805	NS	3.399	NS
Control SED #1	Row	5.483	.05	6.777	.01	5.704	.05	1.337	NS
Experiment SED#2 W/	Col.	1.918	NS	3.164	NS	8.288	.01	11.563	.001
Control SED #1	Row	5.594	.05	0.140	NS	2.610	NS	6.915	.01
Experiment SED#1 W/	Col.					1.682	NS		
Control SED #2	Row					2.129	NS		
Experiment SED#2 W/	Col.					5.872	.05		
Control SED #2	Row					4.900	.05		

QUESTIONNAIRE DATA

Item 5 I feel my group works well together.

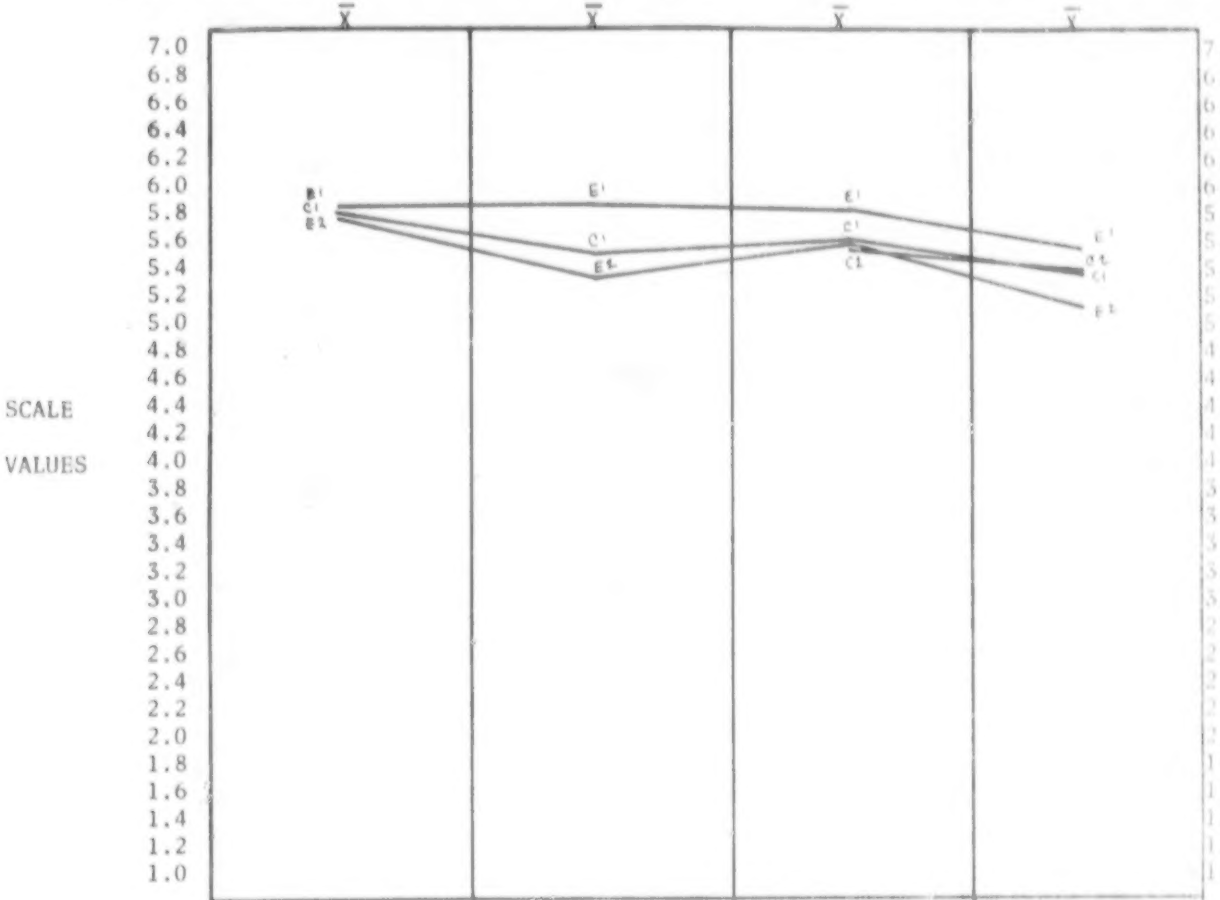


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	5.794	0.863	73	5.575	0.998	68	5.897	1.108	39	5.589	1.207
Experimental SED #2	59	5.271	1.215	51	4.862	1.311	45	5.222	1.520	39	4.871	1.281
Control SED #1	65	5.738	1.162	64	5.187	1.166	67	5.597	1.279	61	5.295	1.358
Control SED #2							61	5.344	1.515	66	5.151	1.315
Total	163			188			241			205		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/	Col.	7.339	.01	6.984	.01	3.355	NS	3.603	NS
Control SED #1	Row	2.439	NS	6.181	.05	3.197	NS	1.056	NS
Experiment SED#2 W/	Col.	9.306	.01	4.773	.05	2.919	NS	6.085	.05
Control SED #1	Row	6.342	.05	3.450	.05	4.369	.05	6.795	.01
Experiment SED#1 W/	Col.					2.062	NS		
Control SED #2	Row					8.098	.01		
Experiment SED#2 W/	Col.					1.855	NS		
Control SED #2	Row					1.015	NS		

QUESTIONNAIRE DATA

Item 6 I really feel my immediate work group is getting things done.

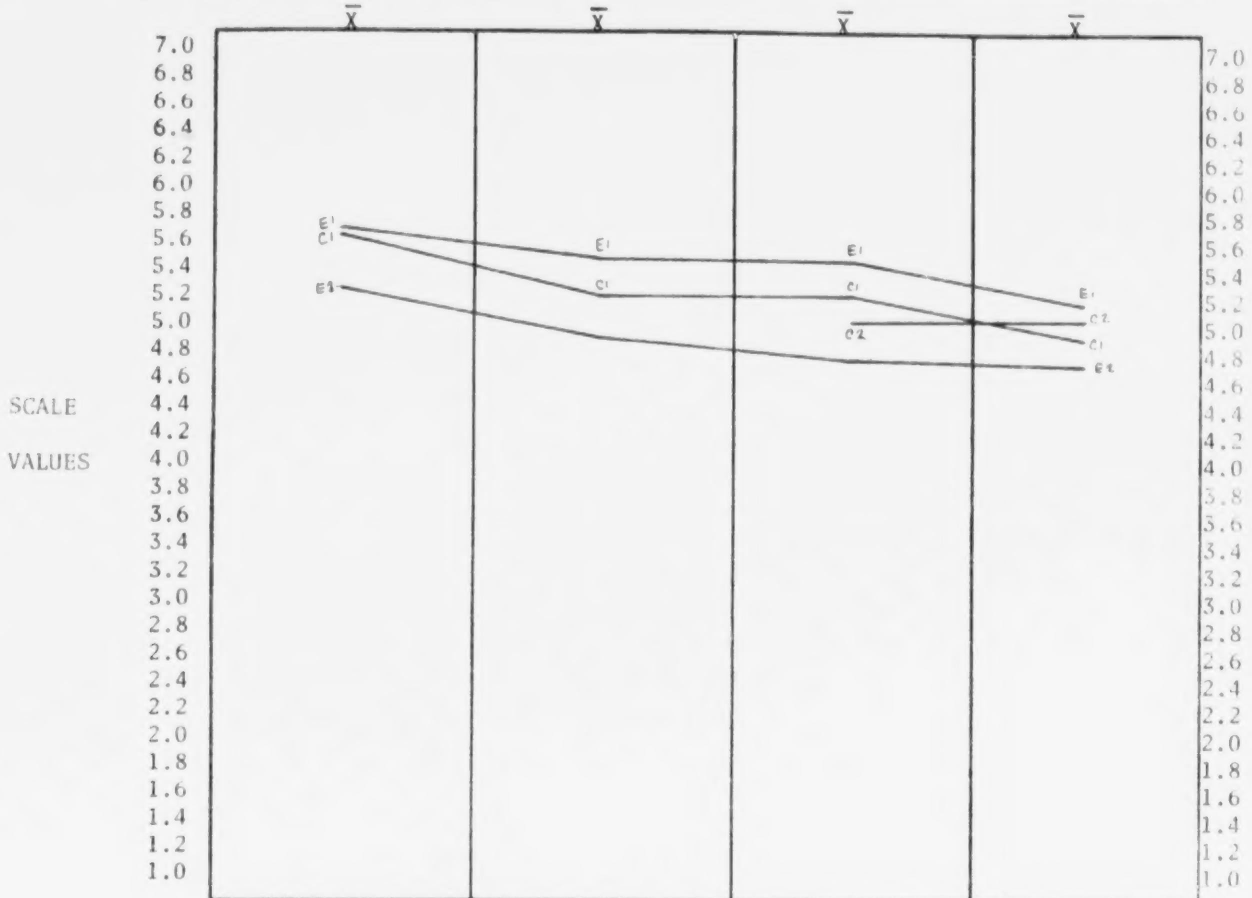


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	5.897	0.882	73	5.904	0.915	68	5.882	1.015	40	5.600	0.928
Experimental SED #2	60	5.800	1.021	52	5.384	1.239	45	5.622	1.192	39	5.153	1.386
Control SED #1	65	5.830	1.024	64	5.546	1.344	67	5.656	1.135	60	5.400	1.237
Control SED #2							61	5.590	1.070	65	5.415	1.102
Total	164			189			241			204		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	0.955	NS	0.107	NS	3.384	NS	5.810	.05
	Row	2.234	NS	4.703	.05	2.110	NS	0.779	NS
Experiment SED#2 W/ Control SED #1	Col.	5.397	.05	1.105	NS	4.402	.05	11.742	.001
	Row	0.411	NS	0.354	NS	0.659	NS	0.776	NS
Experiment SED#1 W/ Control SED #2	Col.					2.698	NS		
	Row					2.935	NS		
Experiment SED#2 W/ Control SED #2	Col.					3.791	NS		
	Row					0.482	NS		

QUESTIONNAIRE DATA

Item 7 When differences arise in my work group, we have good ways for settling them ourselves.

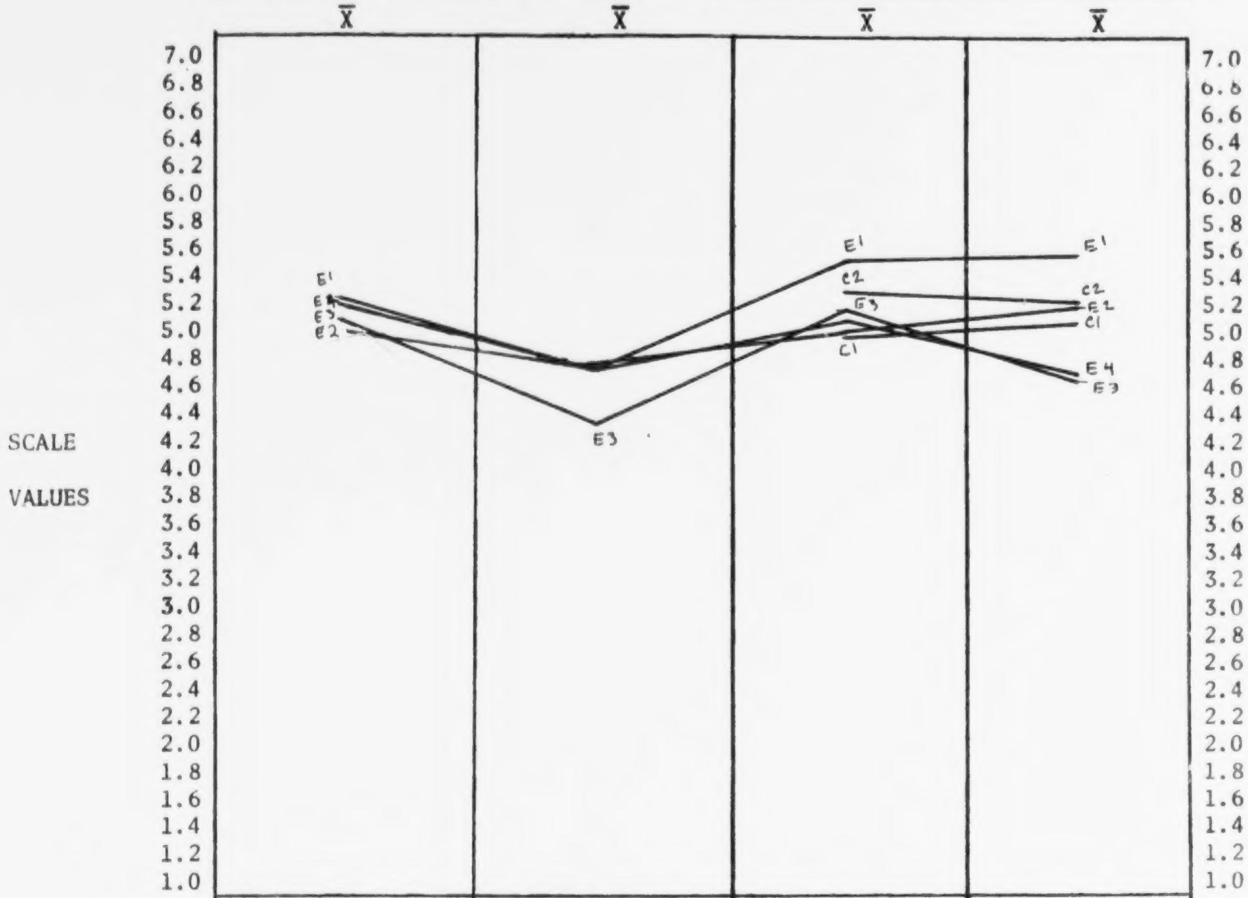


	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experimental SED #1	39	5.717	0.971	73	5.534	0.929	68	5.529	1.190	39	5.205	1.379
Experimental SED #2	60	5.300	1.356	51	4.921	1.453	45	4.800	1.492	40	4.750	1.409
Control SED #1	65	5.676	1.047	64	5.265	1.287	67	5.268	1.354	60	4.950	1.368
Control SED #2							61	5.098	1.457	66	5.090	1.285
Total	164			188			241			205		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/ Control SED #1	Col.	4.372	.05	0.000	NS	3.326	NS	2.774	NS
	Row	1.184	NS	3.328	NS	2.141	NS	0.728	NS
Experiment SED#2 W/ Control SED #1	Col.	5.623	.05	0.047	NS	2.104	NS	13.386	.001
	Row	4.687	.05	2.694	NS	1.429	NS	2.732	NS
Experiment SED#1 W/ Control SED #2	Col.					0.875	NS		
	Row					2.365	NS		
Experiment SED#2 W/ Control SED #2	Col.					0.426	NS		
	Row					1.241	NS		

QUESTIONNAIRE DATA

Item 1 : Based on information I have received from my boss, I know if I am measuring up in my job.

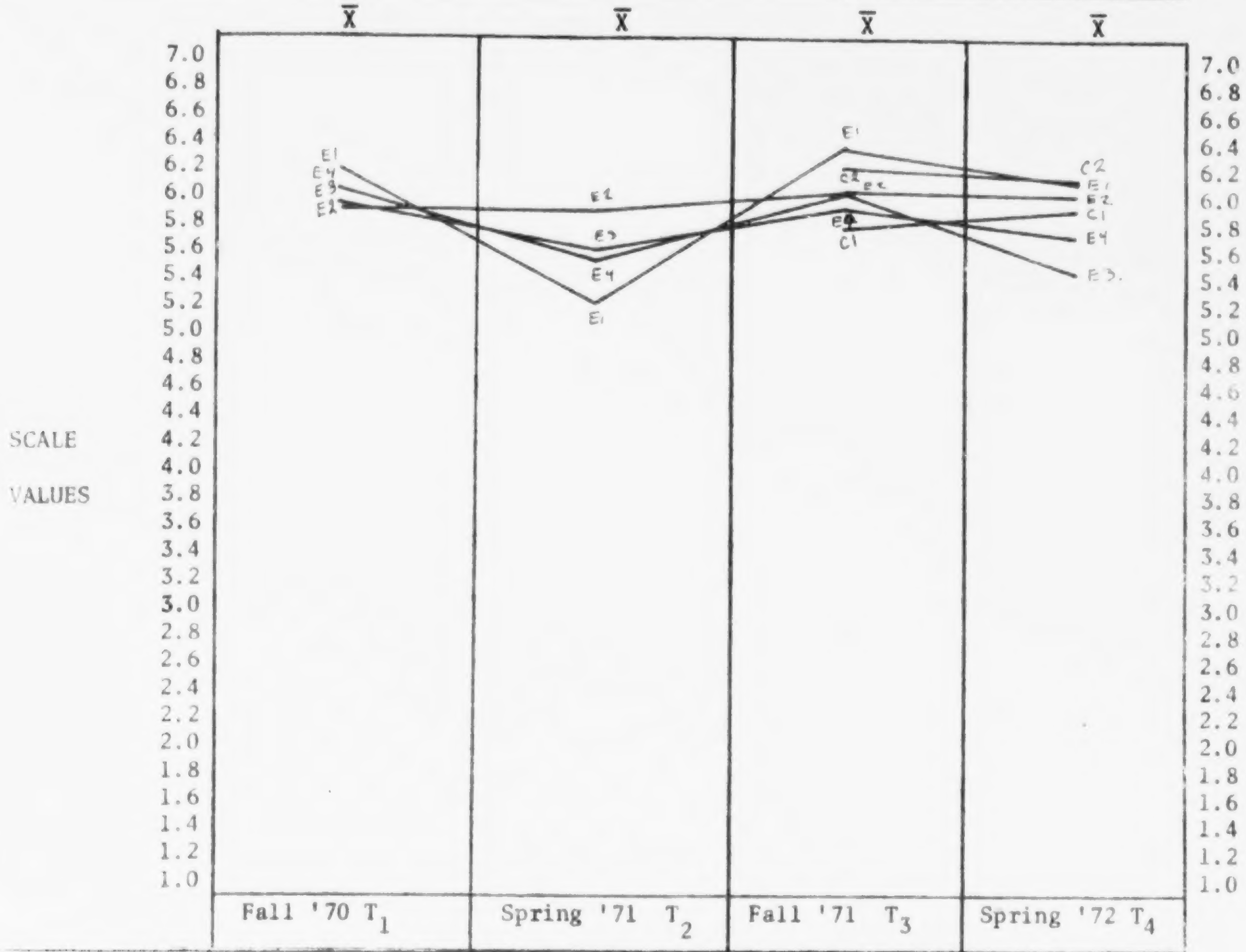


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	5.285	1.242	25	4.760	1.562	32	5.562	1.014	31	5.612	1.022
Experiment LEA #2	39	5.051	1.503	26	4.807	1.233	31	5.032	1.224	31	5.225	1.203
Experiment LEA #3	33	5.121	1.023	17	4.352	1.320	24	5.208	1.020	23	4.695	1.258
Experiment LEA #4	27	5.222	1.395	23	4.782	1.953	29	5.103	1.61	27	4.703	1.727
Control LEA #1							30	5.000	1.286	20	5.100	1.020
Control LEA #2							36	5.333	1.330	33	5.242	1.299
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3			T3 & T4		T1 & T4	
		F	Signif.	F	Signif.		F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	2.152	NS	4.712	.05		0.370	NS	1.235	NS
Experiment LEA#2	Row	0.126	NS	1.040	NS		5.245	.05	1.895	NS
Experiment LEA#3 W/	Col.	4.212	.05	3.310	NS		2.515	NS	3.248	NS
Experiment LEA#4	Row	0.813	NS	0.252	NS		0.028	NS	0.043	NS
Experiment LEA#1 W/						Col.	0.128	NS		
Control LEA #1						Row	6.551	.05		
Experiment LEA#2 W/						Col.	0.403	NS		
Control LEA #1						Row	0.116	NS		
Experiment LEA#3 W/						Col.	1.628	NS		
Control LEA #2						Row	2.017	NS		
Experiment LEA#4 W/						Col.	0.843	NS		
Control LEA #2						Row	2.070	NS		

QUESTIONNAIRE DATA

Item 2 : My manager encourages and supports innovation.

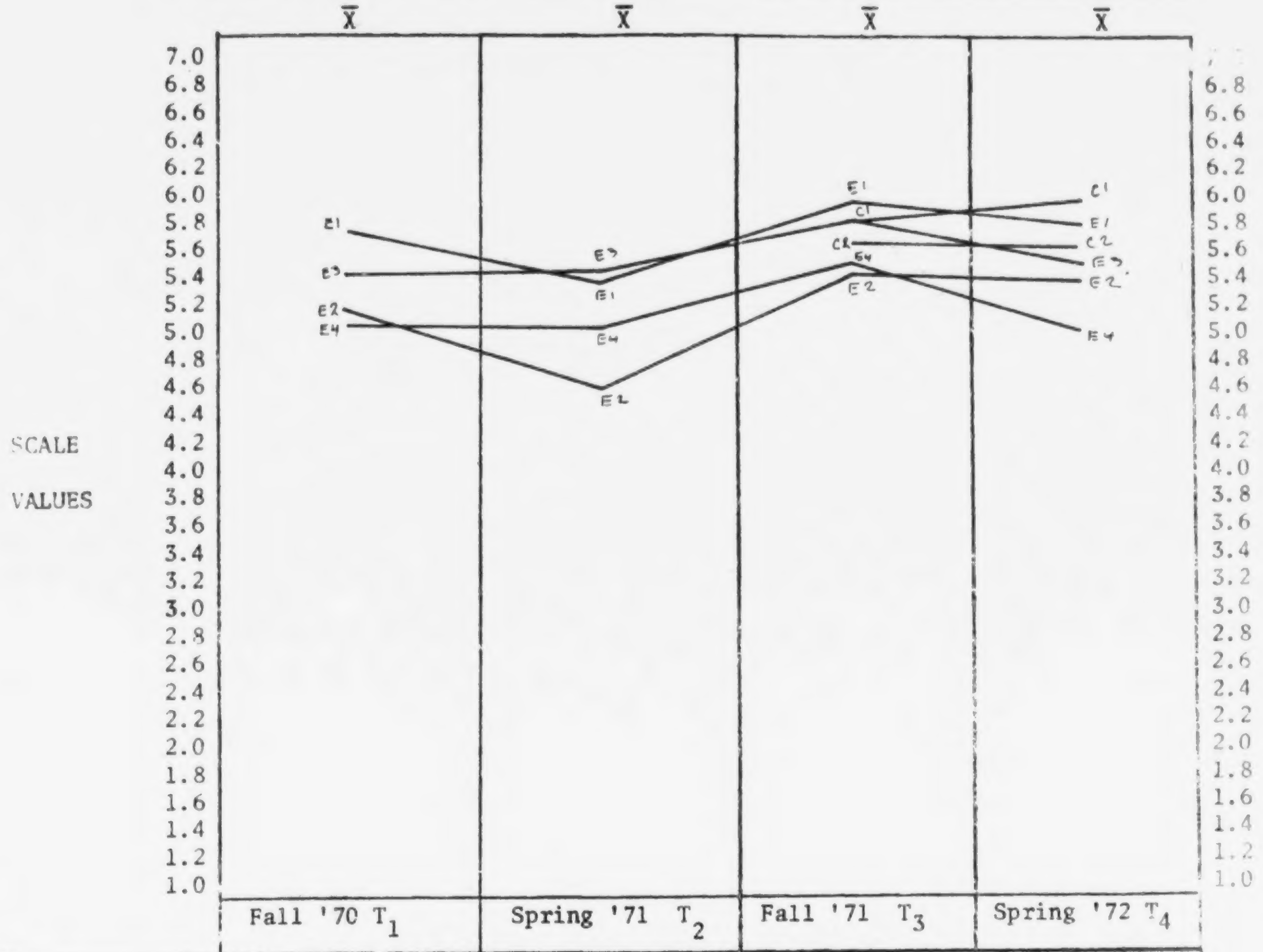


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	6.250	0.751	25	5.240	1.690	32	6.406	0.614	31	6.129	0.805
Experiment LEA #2	39	5.923	1.285	26	5.953	1.137	31	6.096	0.907	32	6.062	1.014
Experiment LEA #3	33	5.969	0.983	17	5.647	1.169	24	5.958	0.907	23	5.739	1.355
Experiment LEA #4	27	6.074	1.206	23	5.521	1.780	29	6.068	1.131	27	5.481	1.553
Control LEA #1							30	5.823	1.366	20	5.950	1.050
Control LEA #2							36	6.333	1.146	33	6.151	0.795
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	4.261	.05	9.888	.01	1.061	NS	0.002	NS
Experiment LEA#2	Row	0.918	NS	1.258	NS	1.546	NS	1.207	NS
Experiment LEA#3 W/	Col.	2.700	NS	2.510	NS	2.602	NS	2.824	NS
Experiment LEA#4	Row	0.001	NS	0.000	NS	0.086	NS	0.097	NS
Experiment LEA#1 W/					Col.	0.179	NS		
Control LEA #1					Row	3.947	.05		
Experiment LEA#2 W/					Col.	0.038	NS		
Control LEA #1					Row	0.796	NS		
Experiment LEA#3 W/					Col.	1.000	NS		
Control LEA #2					Row	3.858	.05		
Experiment LEA#4 W/					Col.	3.351	NS		
Control LEA #2					Row	4.945	.05		

QUESTIONNAIRE DATA

Item 3 : Higher managements reaction to the problems which reach them are fair.

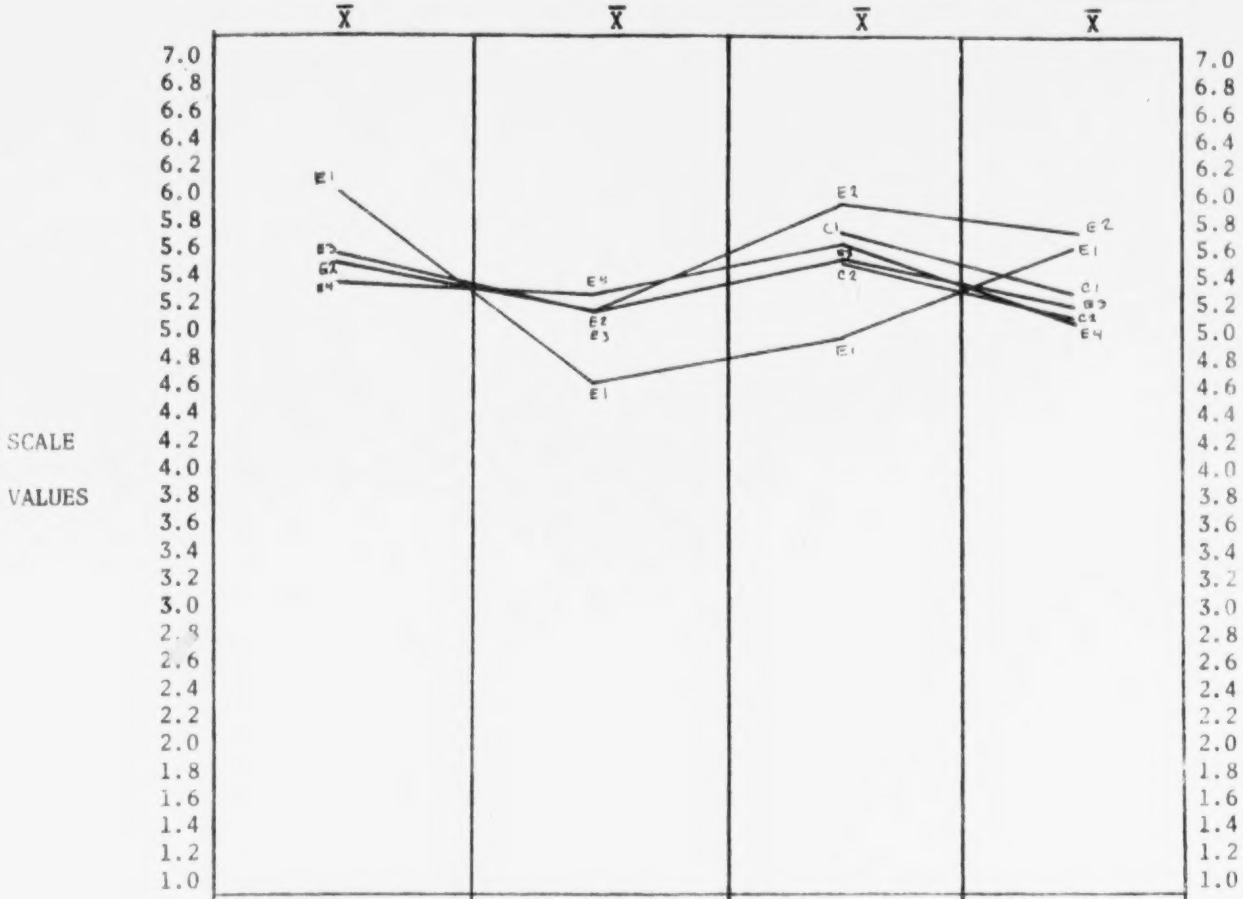


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	5.785	0.875	25	5.400	1.658	32	6.004	0.842	31	5.806	1.013
Experiment LEA #2	39	5.205	1.217	26	4.615	1.098	31	5.451	1.286	31	5.419	1.088
Experiment LEA #3	33	5.454	1.120	17	5.470	1.462	24	5.875	0.899	23	5.521	0.994
Experiment LEA #4	26	5.076	1.741	23	5.030	1.678	29	5.517	1.378	27	5.148	1.536
Control LEA #1							30	5.866	1.195	20	6.000	0.858
Control LEA #2							36	5.694	1.260	33	5.636	1.112
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	4.478	.05	9.522	.01	0.349	NS	0.382	NS
Experiment LEA#2	Row	8.772	.01	8.203	.01	5.990	.05	6.482	.05
Experiment LEA#3 W/	Col.	0.009	NS	2.520	NS	2.127	NS	0.067	NS
Experiment LEA#4	Row	1.882	NS	2.035	NS	2.180	NS	1.992	NS
Experiment LEA#1 W/	Col.					0.024	NS		
Control LEA #1	Row					0.024	NS		
Experiment LEA#2 W/	Col.					0.053	NS		
Control LEA #1	Row					5.147	.05		
Experiment LEA#3 W/	Col.					0.974	NS		
Control LEA #2	Row					0.025	NS		
Experiment LEA#4 W/	Col.					0.811	NS		
Control LEA #2	Row					1.969	NS		

QUESTIONNAIRE DATA

Item 4 : My manager knows and understands the problems I face.

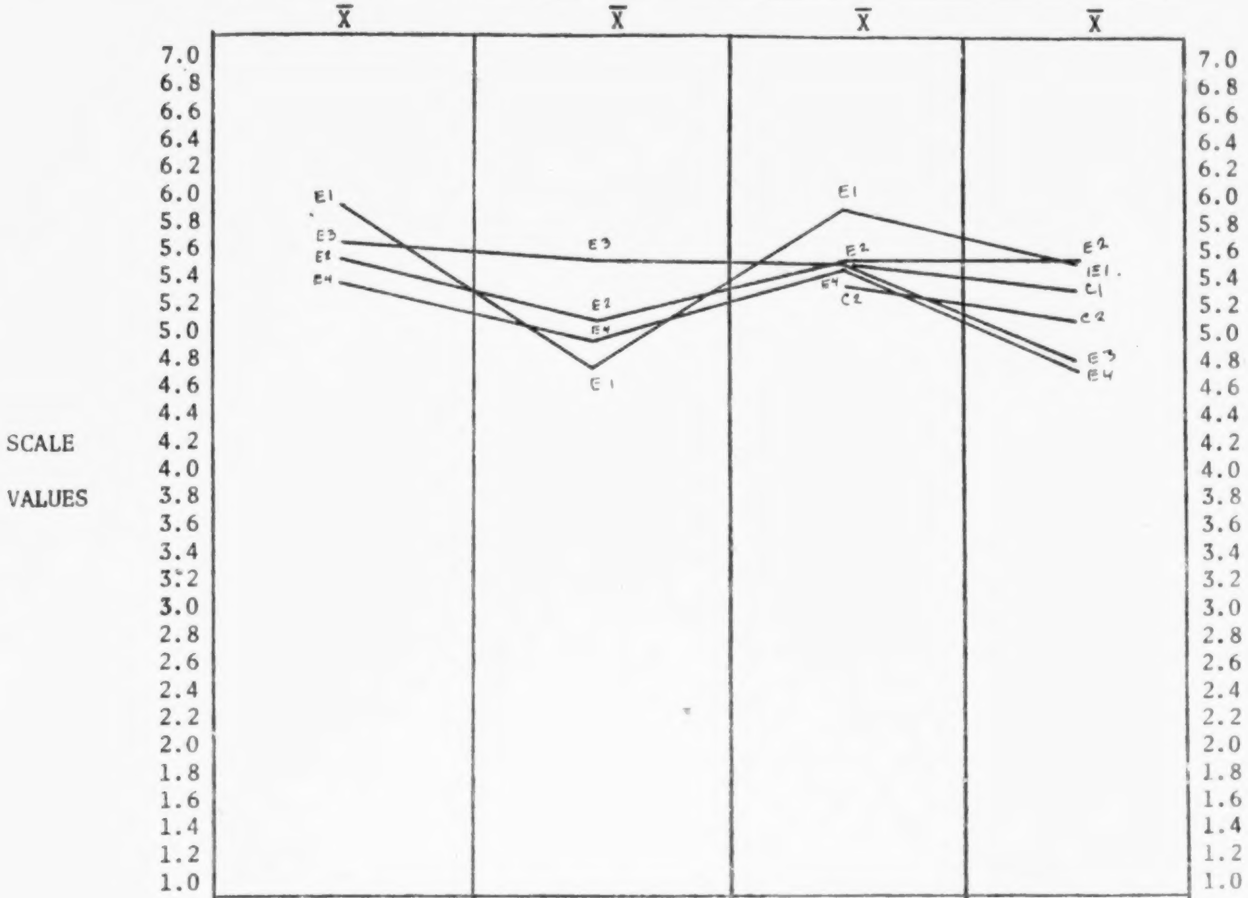


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	$\bar{X}$	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	6.035	0.999	25	4.640	1.845	32	5.000	0.983	32	5.656	0.970
Experiment LEA #2	39	5.512	1.315	26	5.192	1.265	31	5.967	0.795	32	5.750	0.879
Experiment LEA #3	33	5.575	1.275	17	5.176	1.286	24	5.583	1.017	23	5.217	1.166
Experiment LEA #4	27	5.407	1.308	23	5.304	1.987	29	5.684	1.256	27	5.111	1.601
Control LEA #1							30	5.766	1.104	20	5.300	1.341
Control LEA #2							36	5.555	1.382	33	5.121	1.430
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	11.195	.001	20.690	.001	3.011	NS	0.142	NS
Experiment LEA#2	Row	0.000	NS	1.227	NS	0.036	NS	1.294	NS
Experiment LEA#3 W/	Col.	0.680	NS	1.175	NS	3.424	NS	1.590	NS
Experiment LEA#4	Row	0.004	NS	0.150	NS	0.000	NS	0.279	NS
Experiment LEA#1 W/	Col.					3.846	.05		
Control LEA #1	Row					2.035	NS		
Experiment LEA#2 W/	Col.					1.567	NS		
Control LEA #1	Row					3.089	NS		
Experiment LEA#3 W/	Col.					2.796	NS		
Control LEA #2	Row					0.064	NS		
Experiment LEA#4 W/	Col.					3.937	.05		
Control LEA #2	Row					0.059	NS		

QUESTIONNAIRE DATA

Item 5 : My manager recognizes when a problem is developing and does something constructive about it.

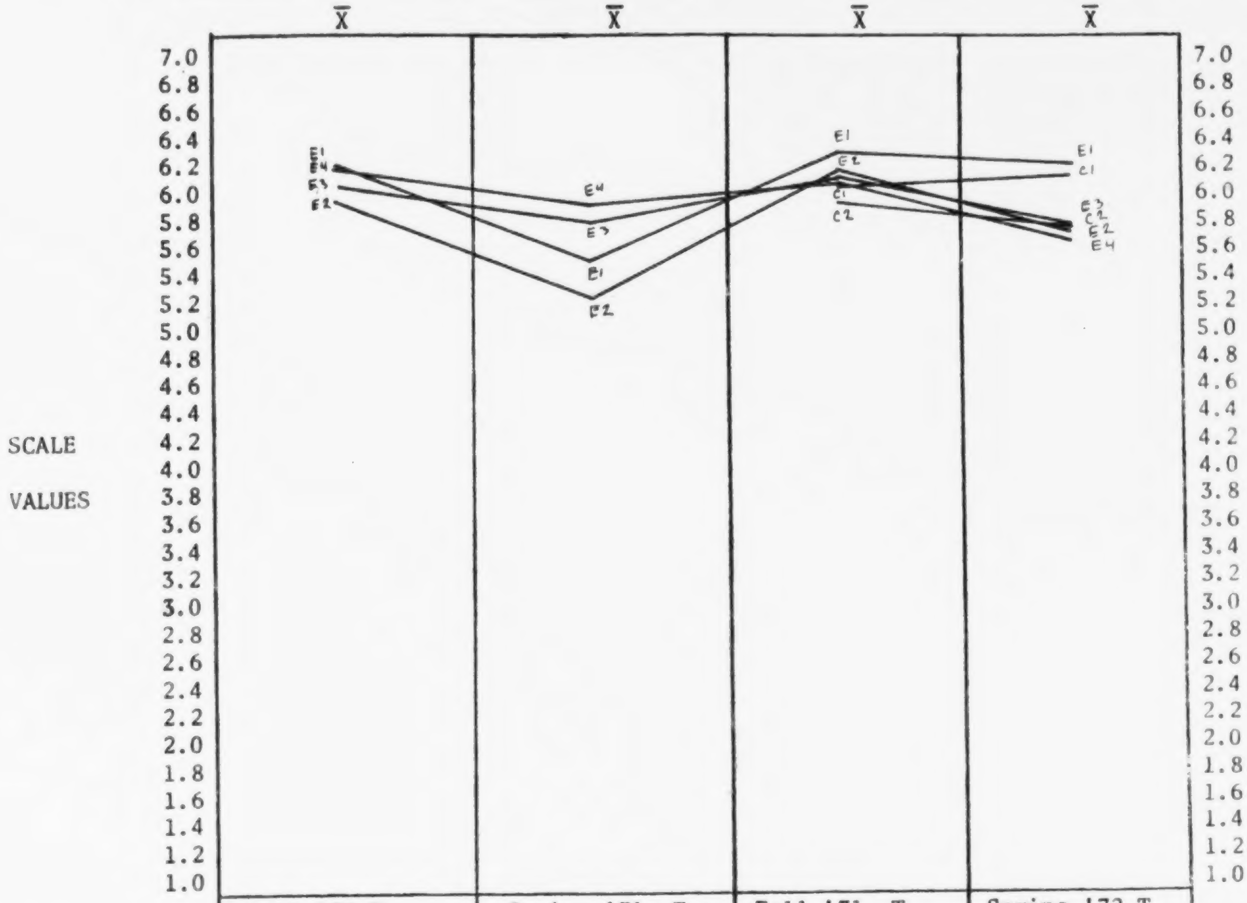


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment LEA #1	28	5.964	0.744	25	4.760	1.640	32	5.937	0.877	31	5.516	1.121
Experiment LEA #2	39	5.461	1.210	26	5.115	1.117	31	5.580	1.118	32	5.562	1.014
Experiment LEA #3	33	5.696	1.103	17	5.560	1.215	24	5.541	1.062	23	4.826	1.497
Experiment LEA #4	27	5.407	1.474	23	4.956	1.637	29	5.482	1.352	27	4.777	1.601
Control LEA #1							30	5.566	1.278	20	5.350	1.348
Control LEA #2							36	5.388	1.439	33	5.151	1.325
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	11.538	.001	13.016	.001	1.415	NS	0.867	NS
Experiment LEA#2	Row	0.104	NS	0.000	NS	0.706	NS	1.498	NS
Experiment LEA#3 W/	Col.	4.086	.05	3.464	NS	6.601	.05	7.633	.01
Experiment LEA#4	Row	0.344	NS	0.031	NS	0.037	NS	0.	NS
Experiment LEA#1 W/	Col.					2.105	NS		
Control LEA #1	Row					1.491	NS		
Experiment LEA#2 W/	Col.					0.270	NS		
Control LEA #1	Row					0.251	NS		
Experiment LEA#3 W/	Col.					3.480	NS		
Control LEA #2	Row					0.114	NS		
Experiment LEA#4 W/	Col.					3.360	NS		
Control LEA #2	Row					0.296	NS		

QUESTIONNAIRE DATA

Item 6 : My manager shows confidence and trust in me.

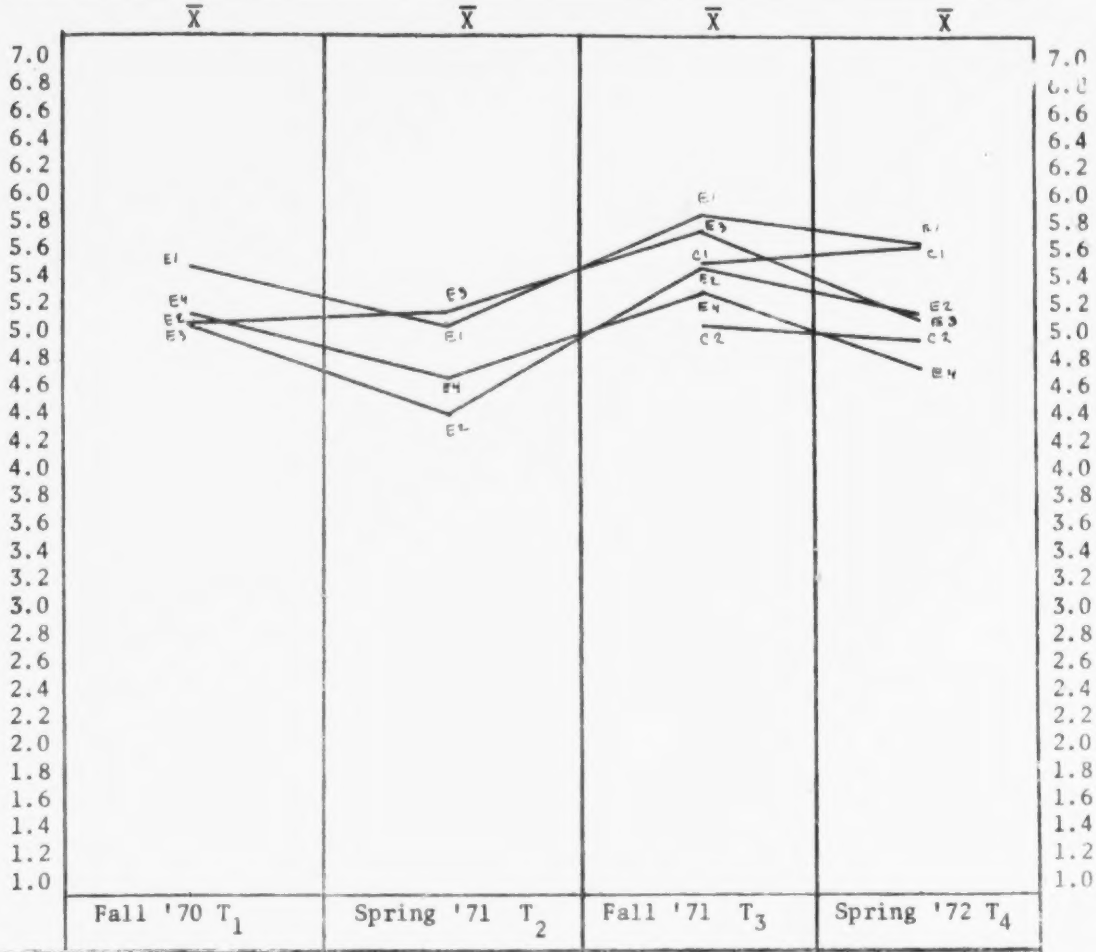


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X̄	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	6.428	0.690	25	5.520	1.661	32	6.343	0.787	31	6.258	0.929
Experiment LEA #2	39	5.974	0.873	26	5.269	1.250	31	6.225	0.716	32	5.750	1.047
Experiment LEA #3	33	6.090	1.071	17	5.823	1.467	24	6.166	0.816	23	5.826	0.984
Experiment LEA #4	27	6.222	1.120	23	5.956	1.691	29	6.137	0.990	27	5.666	1.467
Control LEA #1							30	6.133	0.973	20	6.150	0.988
Control LEA #2							36	5.972	1.206	33	5.818	1.044
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	14.425	.001	17.542	.001	3.201	NS	1.546	NS
Experiment LEA#2	Row	2.753	NS	0.752	.001	3.980	.05	9.181	.01
Experiment LEA#3 W/	Col.	0.963	NS	0.978	NS	3.468	NS	3.289	NS
Experiment LEA#4	Row	0.236	NS	0.038	NS	0.186	NS	0.003	NS
Experiment LEA#1 W/	Gol.					0.038	NS		
Control LEA #1	Row					0.825	NS		
Experiment LEA#2 W/	Col.					1.639	NS		
Control LEA #1	Row					0.735	NS		
Experiment LEA#3 W/	Col.					1.561	NS		
Control LEA #2	Row					0.261	NS		
Experiment LEA#4 W/	Col.					2.155	NS		
Control LEA #2	Row					0.001	NS		

QUESTIONNAIRE DATA

Item 1 : The people I work with participate appropriately in setting the goals of our work.

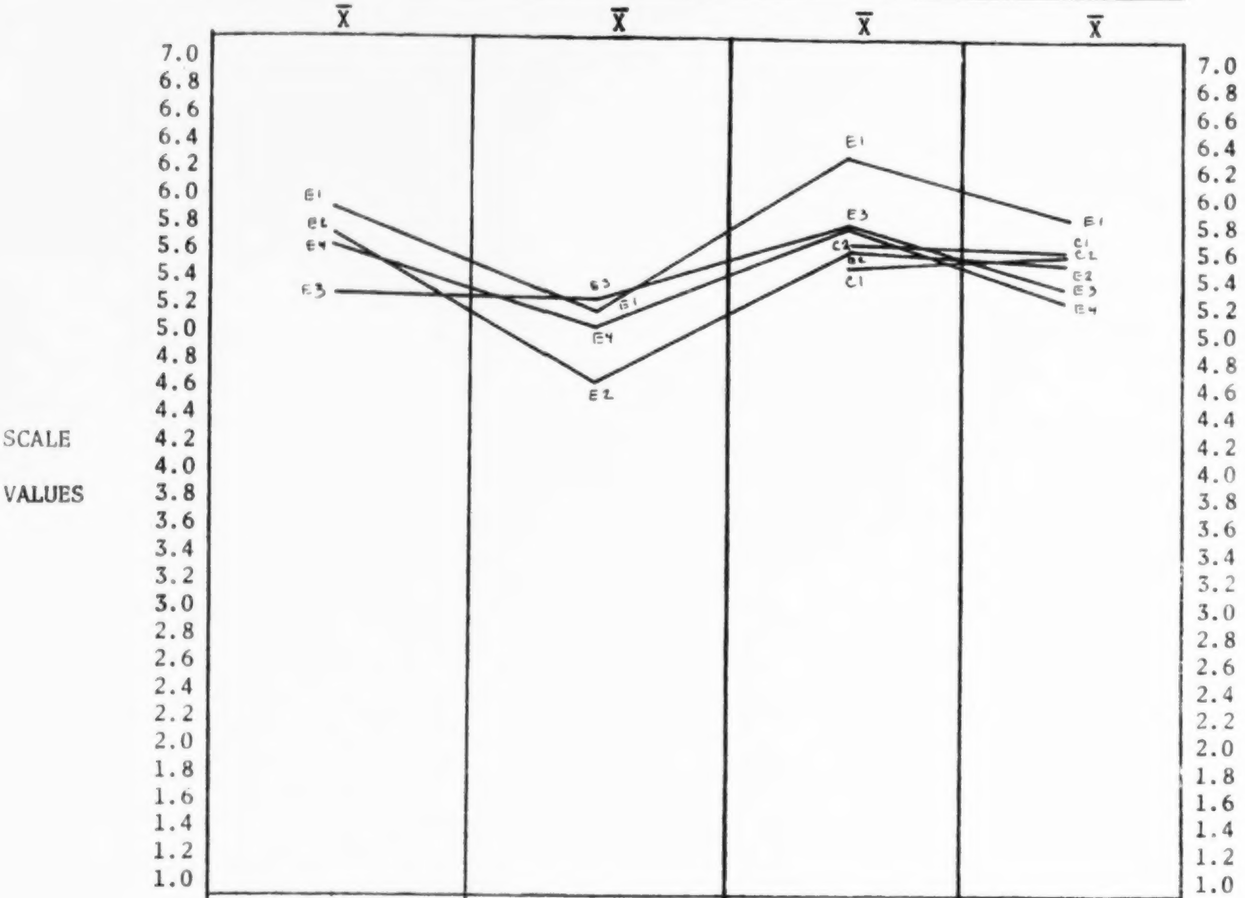


	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experiment LEA #1	28	5.500	0.962	25	5.040	1.567	32	5.875	0.975	31	5.677	0.652
Experiment LEA #2	39	5.076	1.222	26	4.423	1.474	31	5.483	1.387	32	5.187	1.255
Experiment LEA #3	33	5.090	1.283	17	5.176	0.882	24	5.750	0.737	23	5.130	1.423
Experiment LEA #4	27	5.148	1.511	23	4.695	1.917	29	5.310	1.137	26	4.769	1.680
Control LEA #1							30	5.533	1.195	20	5.650	1.089
Control LEA #2							36	5.083	1.338	33	4.969	1.185
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	5.185	.05	13.885	.001	1.573	NS	0.583	NS
Experiment LEA#2	Row	4.520	.05	3.925	.05	5.007	.05	5.865	NS
Experiment LEA#3 W/	Col.	0.370	NS	4.957	.05	5.094	.05	0.356	NS
Experiment LEA#4	Row	0.494	NS	2.297	NS	2.425	NS	0.285	NS
Experiment LEA#1 W/	Col.					0.045	NS		
Control LEA #1	Row					0.951	NS		
Experiment LEA#2 W/	Col.					0.140	NS		
Control LEA #1	Row					1.140	NS		
Experiment LEA#3 W/	Col.					2.550	NS		
Control LEA #2	Row					3.247	NS		
Experiment LEA#4 W/	Col.					1.830	NS		
Control LEA #2	Row					0.003	NS		

QUESTIONNAIRE DATA

Item 2 : I am appropriately involved in decisions affecting my work.

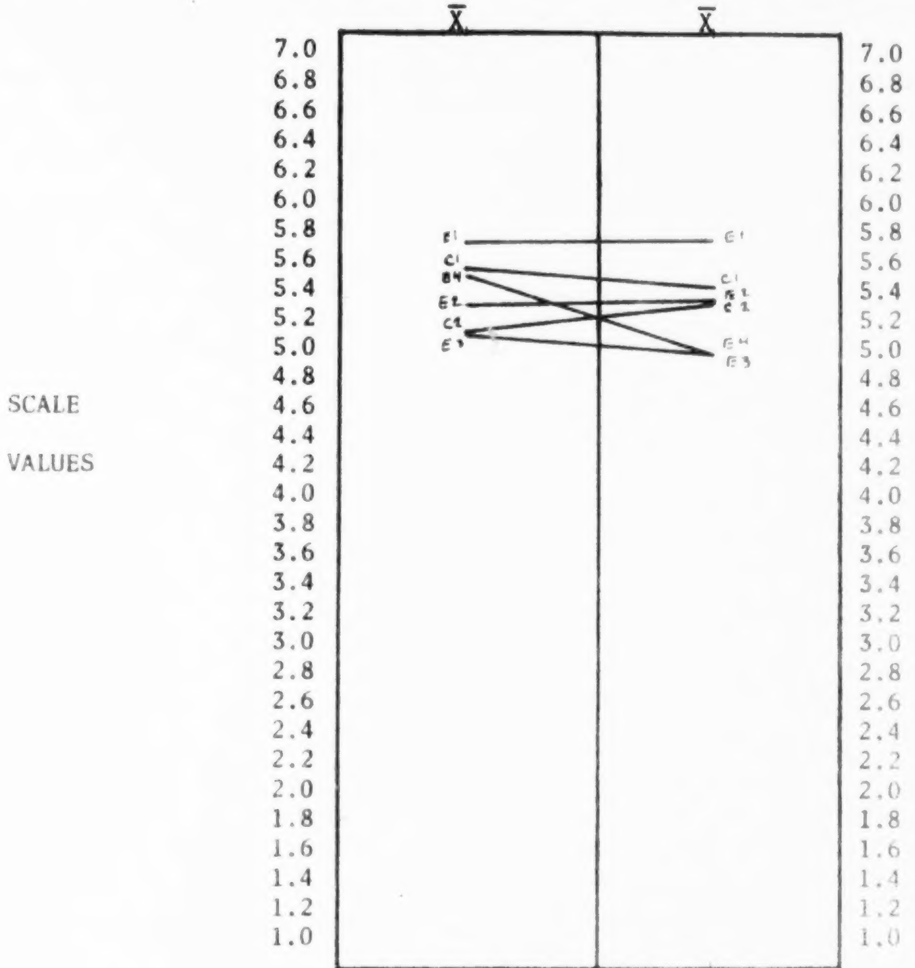


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X̄	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	5.964	1.035	25	5.200	1.707	32	6.125	0.870	31	5.903	0.943
Experiment LEA #2	39	5.769	1.157	26	4.653	1.440	31	5.645	1.443	32	5.562	1.134
Experiment LEA #3	33	5.303	1.530	17	5.294	1.358	24	5.833	0.916	23	5.391	1.117
Experiment LEA #4	27	5.666	1.300	23	5.086	1.998	29	5.827	1.283	27	5.296	1.353
Control LEA #1							30	5.533	1.166	20	5.600	1.142
Control LEA #2							36	5.694	1.090	33	5.636	1.084
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	14.277	.001	13.390	.001	0.566	NS	1.977	NS
Experiment LEA#2	Row	2.200	NS	3.838	NS	4.114	.05	0.494	NS
Experiment LEA#3 W/	Col.	0.829	NS	4.468	.05	4.258	.05	0.293	NS
Experiment LEA#4	Row	0.058	NS	0.123	NS	0.045	NS	0.266	NS
Experiment LEA#1 W/	Col.					0.156	NS		
Control LEA #1	Row					5.192	.05		
Experiment LEA#2 W/	Col.					0.001	NS		
Control LEA #1	Row					0.023	NS		
Experiment LEA#3 W/	Col.					1.551	NS		
Control LEA #2	Row					0.069	NS		
Experiment LEA#4 W/	Col.					1.874	NS		
Control LEA #2	Row					0.231	NS		

QUESTIONNAIRE DATA

Item 3 I can influence the goals, methods, and activities of my organization.

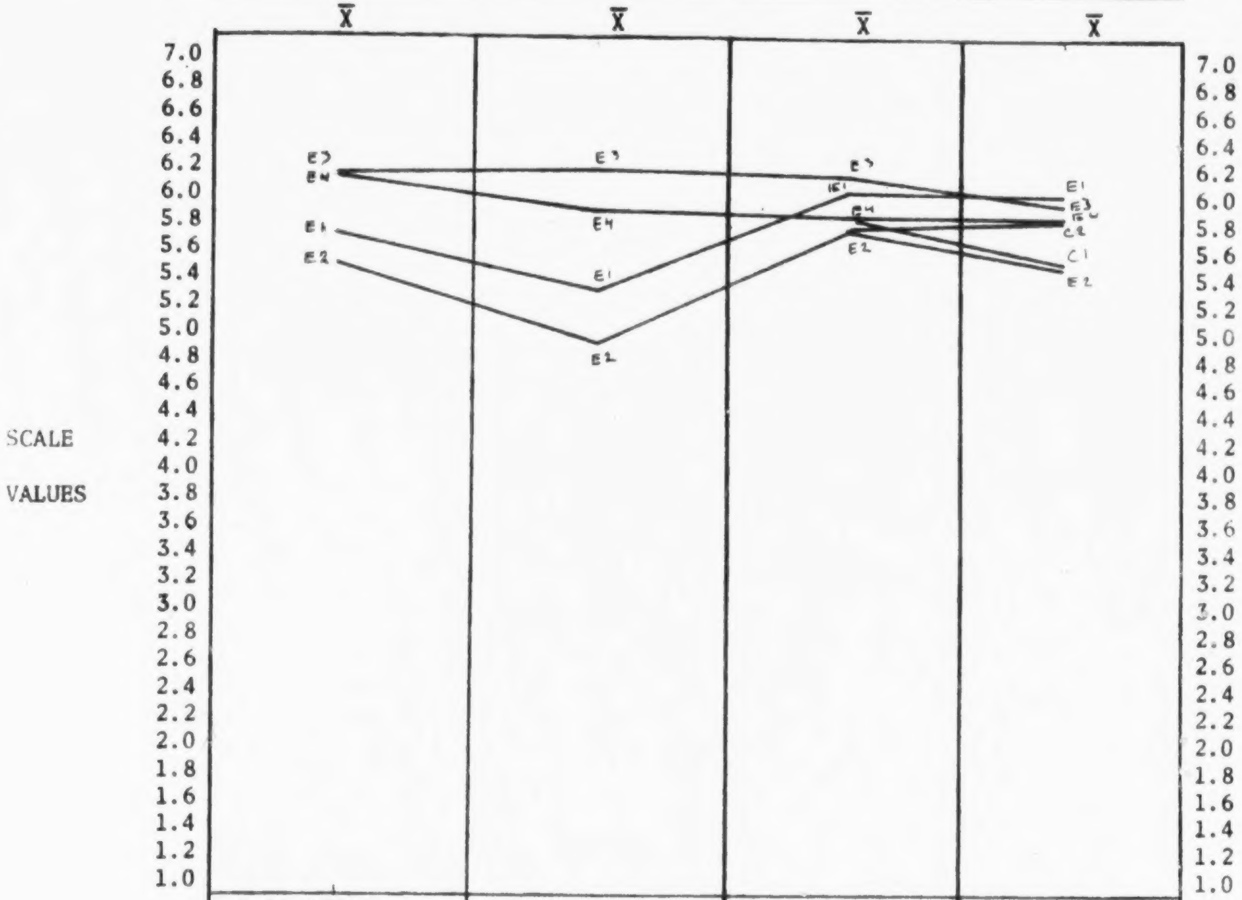


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental LEA #1	32	5.750	0.879	31	5.774	0.804
Experimental LEA #2	31	5.322	1.221	32	5.375	1.263
Experimental LEA #3	24	5.125	1.483	23	5.000	1.087
Experimental LEA #4	29	5.517	1.121	27	5.000	1.664
Control LEA #1	30	5.566	0.987	20	5.450	1.234
Control LEA #2	36	5.138	1.312	33	5.363	1.167
Total	182			166		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1	Col.	0.040	NS
W/Experiment LEA#2	Row	4.766	.05
Experiment LEA#3	Col.	1.417	NS
W/Experiment LEA#4	Row	0.528	NS
Experiment LEA#1	Col.	0.066	NS
W/Control LEA#1	Row	1.997	NS
Experiment LEA#2	Col.	0.020	NS
W/Control LEA#1	Row	0.515	NS
Experiment LEA#3	Col.	0.043	NS
W/Control LEA#2	Row	0.617	NS
Experiment LEA#4	Col.	0.378	NS
W/Control LEA#2	Row	0.000	NS

QUESTIONNAIRE DATA

Item 1 : My group works hard to achieve its goal.

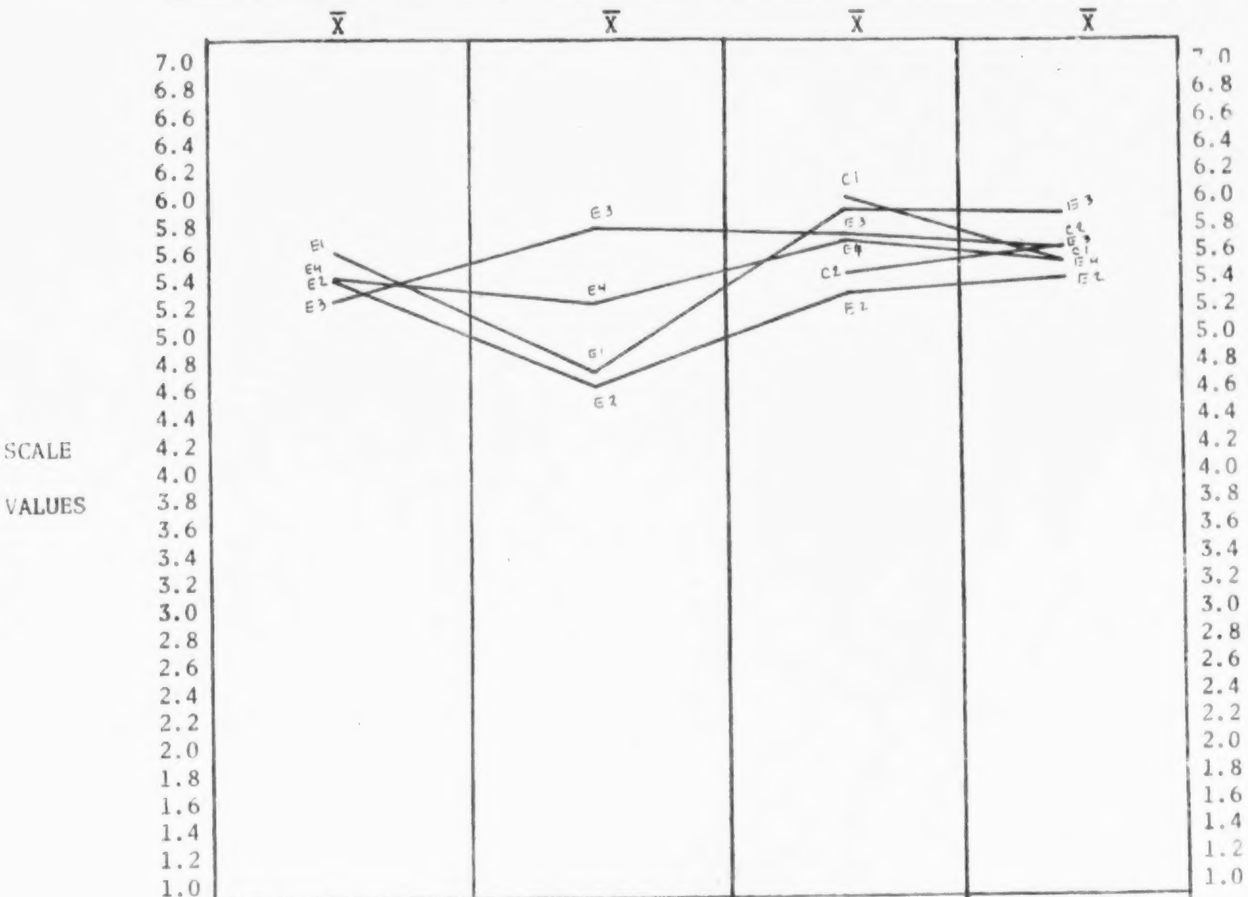


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experiment LEA #1	28	5.750	1.004	25	5.320	1.519	32	6.062	0.840	31	6.043	1.032
Experiment LEA #2	39	5.538	1.120	26	4.961	1.148	31	5.806	1.301	31	5.548	1.260
Experiment LEA #3	33	6.212	0.427	17	6.235	0.752	24	6.208	0.721	23	6.000	1.000
Experiment LEA #4	27	6.185	0.681	23	5.913	1.703	29	5.896	0.476	26	5.884	1.366
Control LEA #1							30	5.900	0.758	20	5.550	0.825
Control LEA #2							36	5.805	1.450	33	5.878	0.927
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	5.060	.05	12.118	.001	0.637	NS	0.433	NS
Experiment LEA#2	Row	1.621	NS	1.816	NS	3.105	NS	2.824	NS
Experiment LEA#3 W/	Col.	0.311	NS	0.008	NS	0.280	NS	1.708	NS
Experiment LEA#4	Row	0.613	NS	1.797	NS	1.054	NS	0.131	NS
Experiment LEA#1 W/	Col.					1.512	NS		
Control LEA #1	Row					3.334	.05		
Experiment LEA#2 W/	Col.					2.107	NS		
Control LEA #1	Row					0.516	NS		
Experiment LEA#3 W/	Col.					0.105	NS		
Control LEA #2	Row					1.589	NS		
Experiment LEA#4 W/	Col.					0.019	NS		
Control LEA #2	Row					0.049	NS		

QUESTIONNAIRE DATA

Item 2 : My work group understands what we are trying to achieve.

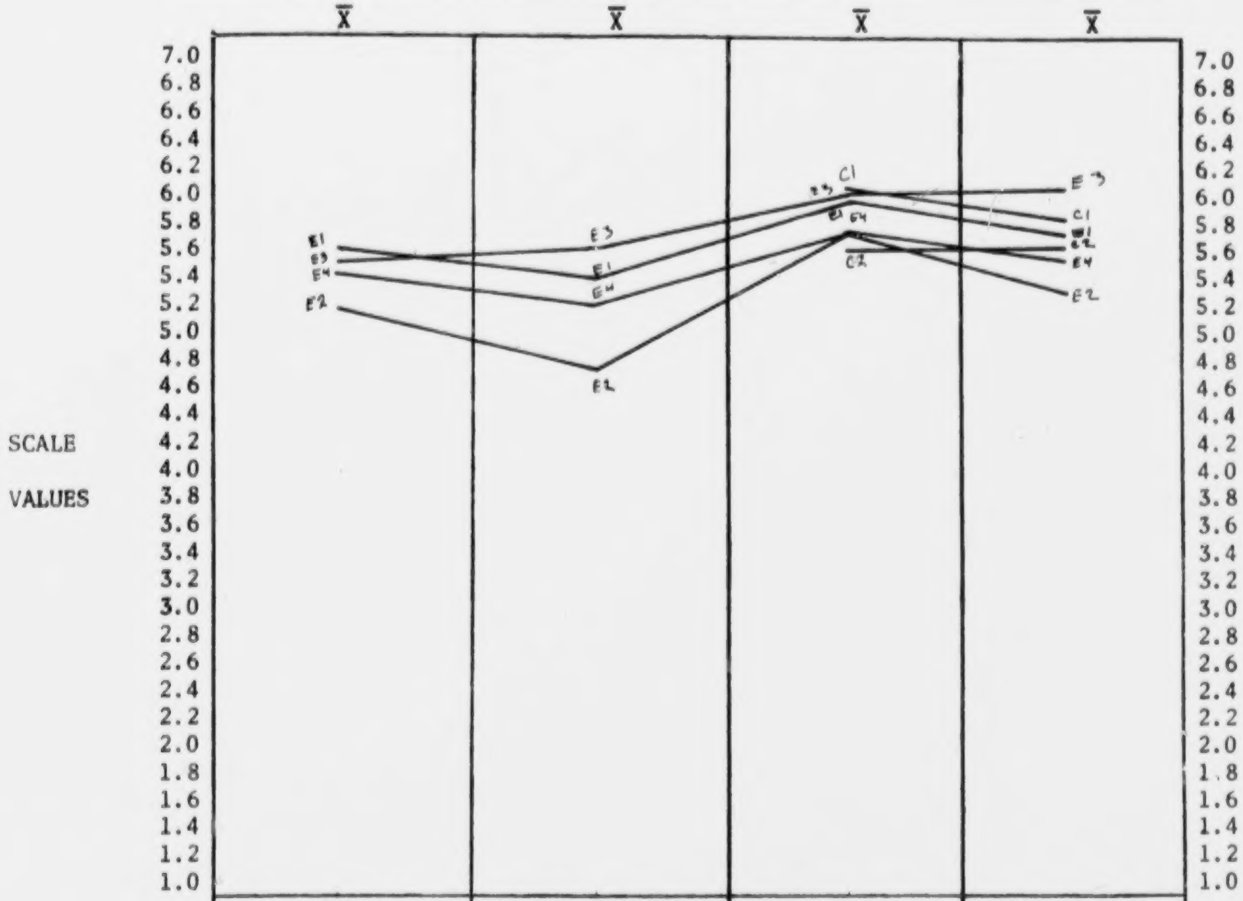


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	5.642	0.869	25	4.760	1.507	32	5.968	0.897	31	5.903	0.830
Experiment LEA #2	39	5.435	1.231	26	4.653	1.412	31	5.322	1.491	32	5.437	1.318
Experiment LEA #3	33	5.303	0.983	17	5.823	0.951	24	5.750	0.793	23	5.652	0.934
Experiment LEA #4	27	5.444	1.012	23	5.260	1.789	29	5.724	1.098	26	5.500	1.029
Control LEA #1							30	6.033	0.718	20	5.550	0.887
Control LEA #2							36	5.472	1.383	33	5.666	1.080
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/ Experiment LEA#2	Col.	12.386	.001	13.921	.001	0.014	NS	0.453	NS
	Row	0.438	NS	2,235	NS	7.139	.01	2.992	NS
Experiment LEA#3 W/ Experiment LEA#4	Col.	0.450	NS	0.568	NS	0.683	NS	1.114	NS
	Row	0.704	NS	1.296	NS	0.209	NS	0.000	NS
Experiment LEA#1 W/ Control LEA #1	Col.					2.958	NS		
	Row					0.818	NS		
Experiment LEA#2 W/ Control LEA #1	Col.					0.669	NS		
	Row					3.341	NS		
Experiment LEA#3 W/ Control LEA #2	Col.					0.052	NS		
	Row					0.392	NS		
Experiment LEA#4 W/ Control LEA #2	Col.					0.004	NS		
	Row					0.040	NS		

QUESTIONNAIRE DATA

Item 3 : I feel my group works well together.

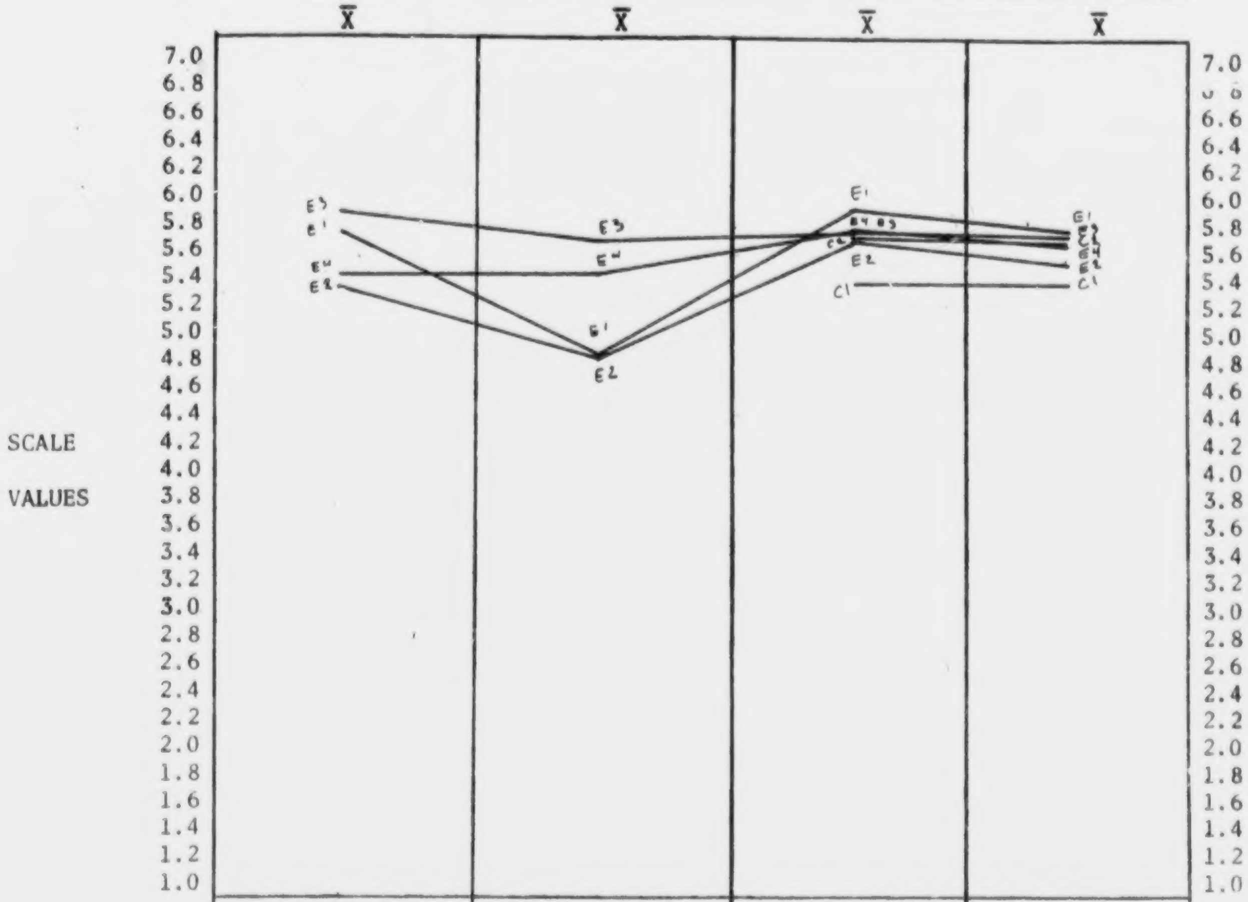


	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	5.642	0.869	25	5.439	1.581	32	6.000	1.047	31	5.741	1.315
Experiment LEA #2	39	5.205	1.004	26	4.730	1.185	31	5.774	1.116	32	5.312	1.468
Experiment LEA #3	33	5.515	1.093	17	5.647	0.996	24	6.041	0.750	23	6.086	0.949
Experiment LEA #4	27	5.444	1.423	23	5.217	1.881	29	5.793	1.292	26	5.576	1.270
Control LEA #1							30	6.066	0.907	20	5.850	1.089
Control LEA #2							36	5.638	1.334	33	5.666	0.853
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	6.612	.05	19.427	.001	2.615	NS	0.242	NS
Experiment LEA#2	Row	2.647	NS	1.140	NS	2.167	NS	4.272	.05
Experiment LEA#3 W/	Col.	0.027	NS	3.058	NS	0.151	NS	2.309	NS
Experiment LEA#4	Row	0.767	NS	1.494	NS	2.975	NS	1.570	NS
Experiment LEA#1 W/	Col.					1.263	NS		
Control LEA #1	Row					0.171	NS		
Experiment LEA#2 W/	Col.					2.266	NS		
Control LEA #1	Row					3.392	NS		
Experiment LEA#3 W/	Col.					0.035	NS		
Control LEA #2	Row					4.473	.05		
Experiment LEA#4 W/	Col.					0.188	NS		
Control LEA #2	Row					0.022	NS		

QUESTIONNAIRE DATA

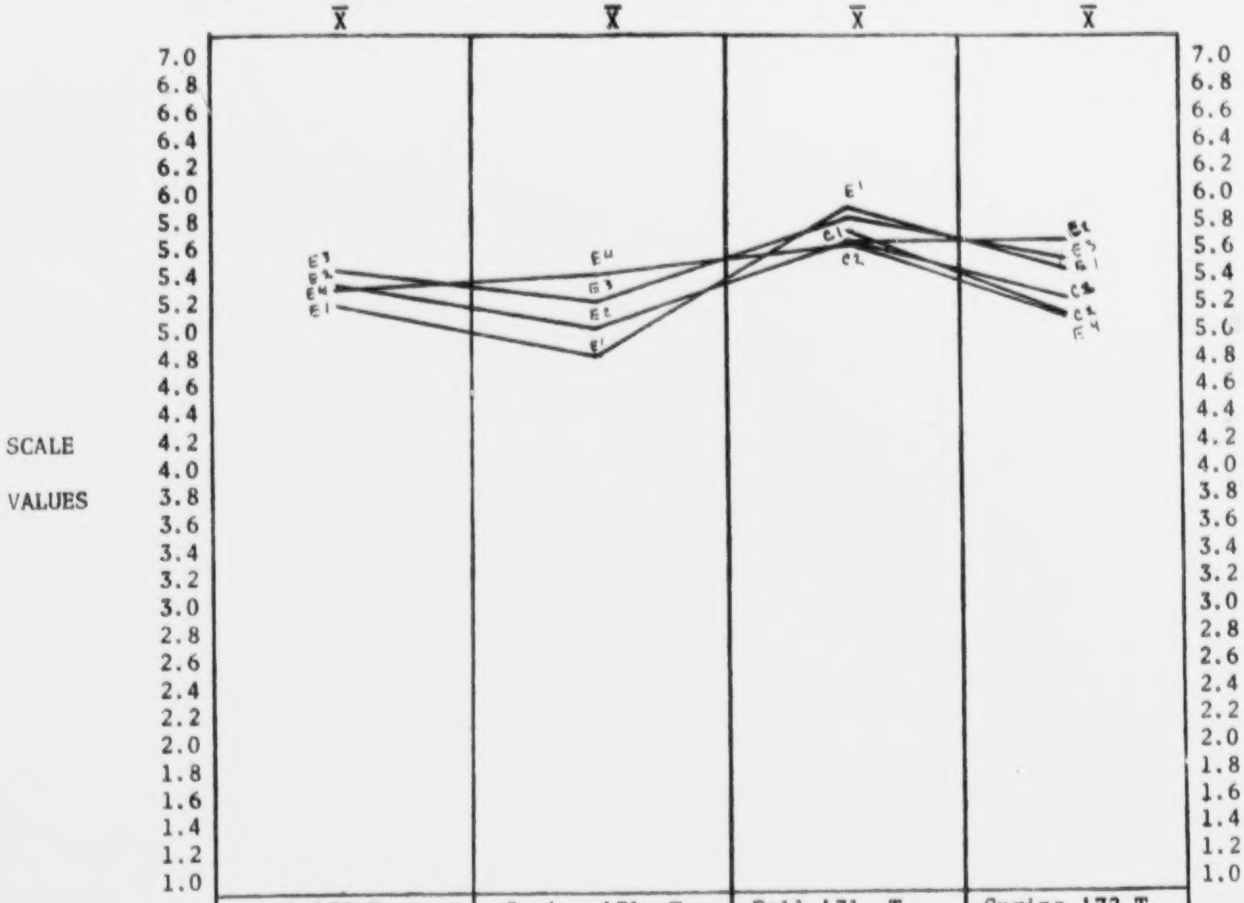
Item 4 : I really feel my immediate work group is getting things done.



	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experiment LEA #1	28	5.785	0.917	25	4.880	1.641	32	5.968	0.897	31	5.806	0.872
Experiment LEA #2	39	5.384	1.183	26	4.846	1.286	31	5.709	0.901	32	5.531	1.135
Experiment LEA #3	33	5.818	0.808	17	5.705	0.919	24	5.791	0.431	23	5.782	1.042
Experiment LEA #4	27	5.444	1.527	23	5.434	1.804	29	5.793	0.977	26	5.692	0.884
Control LEA #1							30	5.400	0.803	20	5.400	1.046
Control LEA #2							36	5.750	1.204	33	5.727	1.179
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/	Col.	9.345	.01	19.005	.001	0.994	NS	0.203	NS
Experiment LEA#2	Row	0.847	NS	0.427	NS	2.444	NS	3.326	NS
Experiment LEA#3 W/	Col.	0.050	NS	0.745	NS	0.082	NS	0.253	NS
Experiment LEA#4	Row	1.411	NS	0.274	NS	0.054	NS	1.211	NS
Experiment LEA#1 W/ Control LEA #1	Col.					3.729	NS		
	Row					1.919	NS		
Experiment LEA#2 W/ Control LEA #1	Col.					3.289	NS		
	Row					0.024	NS		
Experiment LEA#3 W/ Control LEA #2	Col.					0.005	NS		
	Row					0.052	NS		
Experiment LEA#4 W/ Control LEA #2	Col.					0.098	NS		
	Row					0.000	NS		

Item 5 : When differences arise in my work group, we have good ways for settling them ourselves.



	Fall '70 T_1			Spring '71 T_2			Fall '71 T_3			Spring '72 T_4		
	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	5.214	1.227	25	4.840	1.700	32	5.937	0.840	32	5.468	1.135
Experiment LEA #2	39	5.384	1.227	26	5.038	1.399	31	5.709	0.472	32	5.281	1.275
Experiment LEA #3	33	5.484	1.301	17	5.235	1.091	24	5.875	0.899	23	5.565	0.945
Experiment LEA #4	27	5.333	1.493	23	5.434	1.973	29	5.689	1.256	27	5.148	1.321
Control LEA #1							30	5.766	1.165	20	5.150	1.136
Control LEA #2							36	5.638	1.174	33	5.609	0.998
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/ Experiment LEA#2	Col.	1.956	NS	14.377	.001	5.584	.05	0.124	NS
	Row	0.512	NS	0.003	NS	1.196	NS	0.001	NS
Experiment LEA#3 W/ Experiment LEA#4	Col.	0.057	NS	2.382	NS	3.580	NS	0.044	NS
	Row	0.006	NS	0.000	NS	1.793	NS	1.307	NS
Experiment LEA#1 W/ Control LEA #1	Col.					7.066	.01		
	Row					1.437	NS		
Experiment LEA#2 W/ Control LEA #1	Col.					5.678	.01		
	Row					0.028	NS		
Experiment LEA#3 W/ Control LEA #2	Col.					0.774	NS		
	Row					0.251	NS		
Experiment LEA#4 W/ Control LEA #2	Col.					1.813	NS		
	Row					0.411	NS		

APPENDIX C

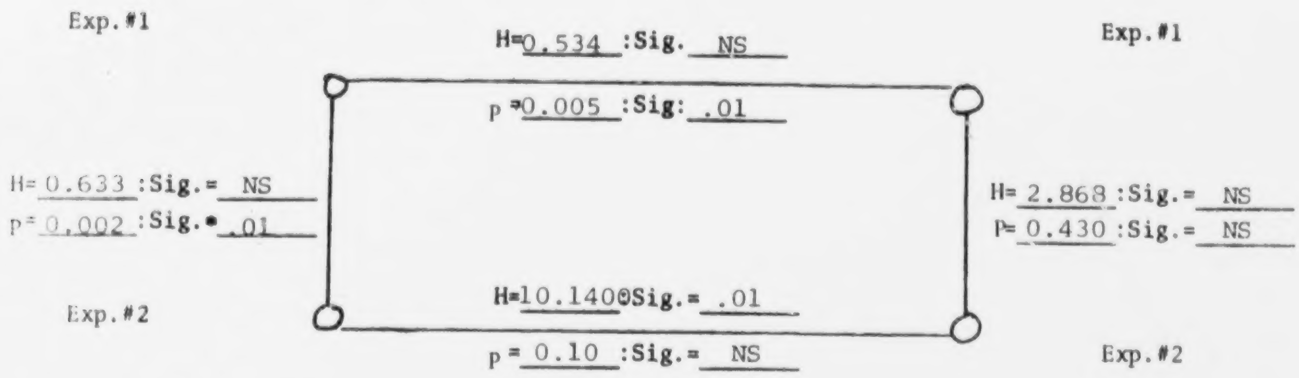
SCHEMATIC PRESENTATION OF DATA - END-RESULT VARIABLES, CHAPTER SIX

CONTENT ANALYSIS DATA

Item 1 : Produce and Implement a Long Range Plan

SCHEMATIC PRESENTATION OF ANALYSIS

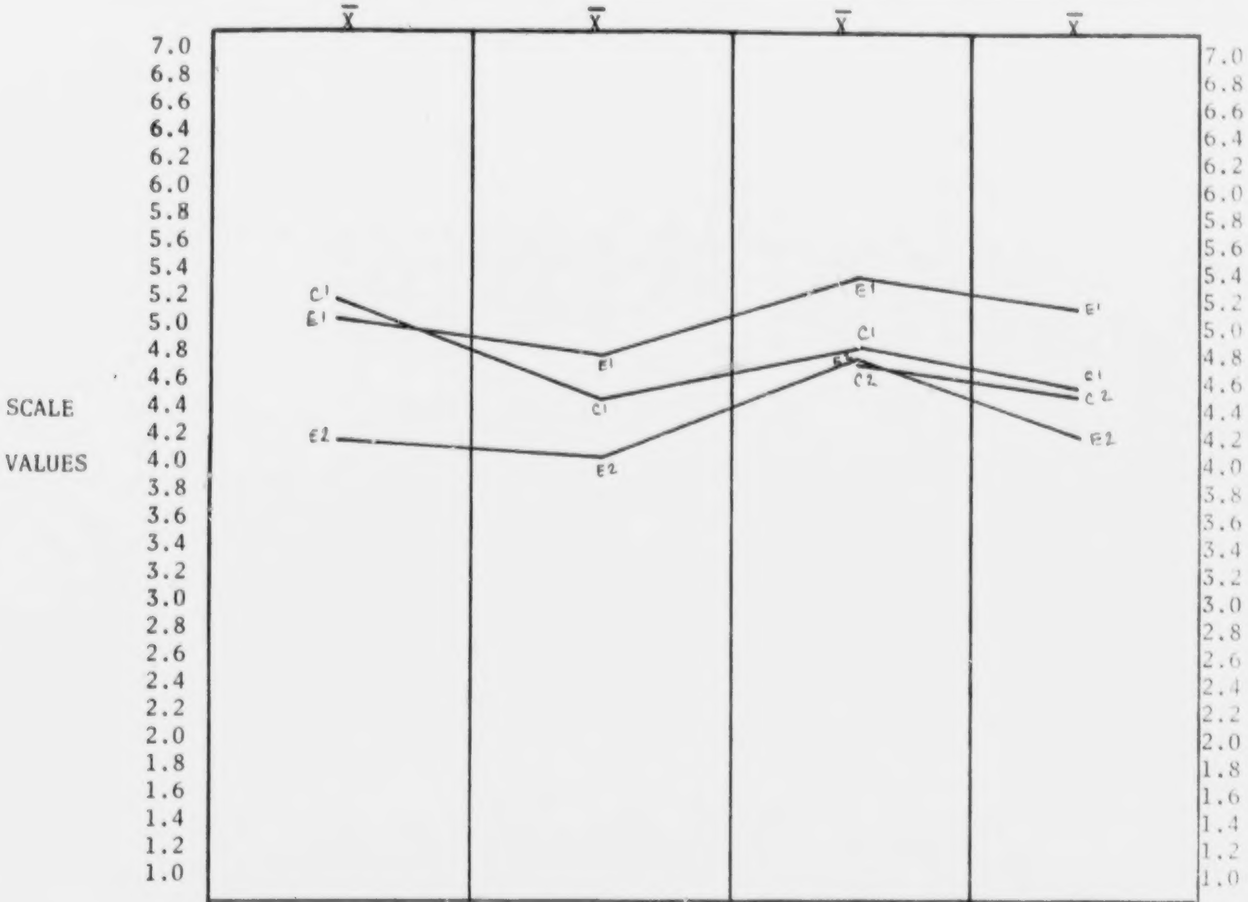
Fall, 1970 Spring, 1972


Exp.#1
H=0.534 :Sig. NS
p =0.005 :Sig: .01
Exp.#1
H=0.633 :Sig.= NS
p=0.002 :Sig.= .01
H=2.868 :Sig.= NS
P=0.430 :Sig.= NS
Exp.#2
H=10.140 :Sig.= .01
p = 0.10 :Sig.= NS
Exp.#2

Fall, 1970	N	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	5 10	H=0.633 Sig.= NS	P =0.002 Sig. .01
Spring, 197			
Experiment #1 & Experiment #2	7 9	H=2.868 Sig.= NS	p =0.430 Sig.= NS
Fall 1970 t Spring, 197			
Experiment #1 & Experiment #1	5 7	H=0.5340 Sig.= NS	p =10.1400 Sig.= .01
Experiment #2 & xperiment #2	10 9	H=0.005 Sig.= .01	p =0.10 Sig.= NS

QUESTIONNAIRE DATA

Item 2 My organization's overall plan is operable.



	Fall, 1970 T1			Spring, 1971 T2			Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experimental SED #1	39	5.079	1.132	73	4.821	1.456	68	5.411	1.318	40	5.175	1.278
Experimental SED #2	59	4.203	1.648	52	4.096	1.375	45	4.822	1.402	39	4.256	1.463
Control SED #1	64	5.203	1.210	64	4.500	1.447	67	4.895	1.232	59	4.610	1.450
Control SED #2							61	4.737	1.662	66	4.545	1.337
Total	164			188			241			205		

Two-Way Anal of Var.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment SED#1 W/	Col.	7.207	.01	8.802	.01	2.175	NS	1.782	NS
Control SED #1	Row	0.300	NS	6.368	.05	9.328	.01	1.400	NS
Experiment SED#2 W/	Col.			9.421	.01	4.795	.05		
Control SED #1	Row			1.705	NS	1.207	NS		
Experiment SED#1 W/	Col.					1.290	NS		
Control SED #2	Row					11.914	.001		
Experiment SED#2 W/	Col.					3.327	NS		
Control SED #2	Row					0.242	NS		

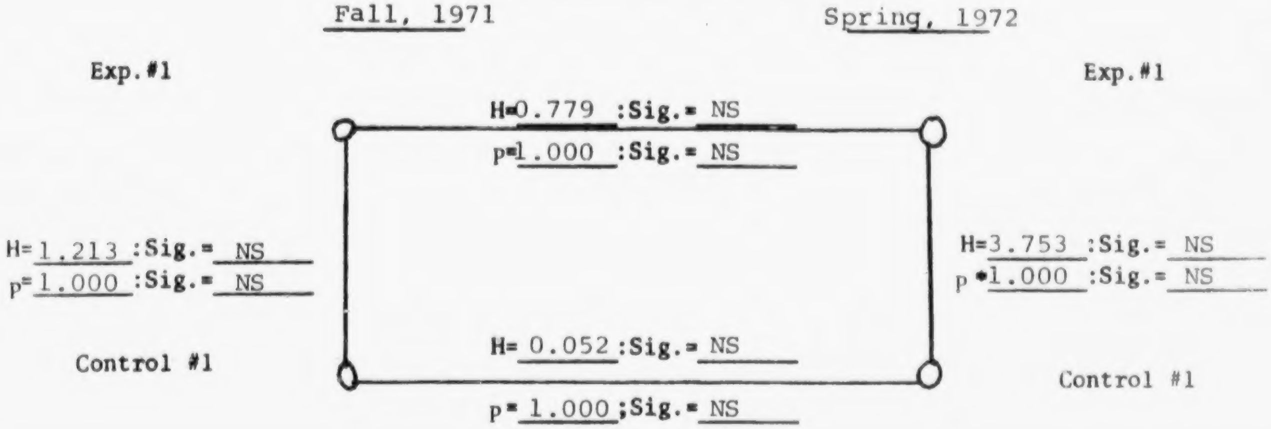
Item 1 : Number of objectives toward which Progress has been made.

Fall, 1971	N	Kruskal-Wallis One-Way Analysis of Variance	Binominal Test of Proportions
Experiment#1 & Control #1	9 11	H=1.213 Signif.= NS	P = 1.000 Signif.= NS
Experiment#2 & Control #1	10 11	H=0.019 Signif.= NS	p = 1.000 Signif.= NS
Experiment#1 & Experiment#2	9 11	H=1.213 Signif.= NS	P= 1.000 Signif.= NS
Spring, 1972			
Experiment#1 & Control #1	9 11	H=3.753 Signif.= NS	P = 1.000 Signif.= NS
Experiment#2 & Control #1	10 11	H=0.044 Signif.= NS	P = 1.000 Signif.= NS
Experiment#1 & Experiment#2	9 10	H=3.081 Signif.= NS	P=1.000 Signif.= NS
Fall 1971 to Spring, 1972			
Experiment #1 & Experiment #1	9 9	H= 0.779 Signif.= NS	p= 1.000 Signif.= NS
Experiment #2 & Experiment #2	10 10	H= 0.005 Signif.= NS	p= 1.000 Signif= NS
Control#1 & Control#1	11 11	H= 0.052 Signif.= NS	P = 1.000 Signif.= NS

CONTENT ANALYSIS DATA

Item 1 : Number of objectives toward which Progress has been made.

SCHEMATIC PRESENTATION OF ANALYSIS


Fall, 1971

Spring, 1972

Exp.#1

Exp.#1

H=0.779 :Sig.= NS

p=1.000 :Sig.= NS

H=1.213 :Sig.= NS

p=1.000 :Sig.= NS

H=3.753 :Sig.= NS

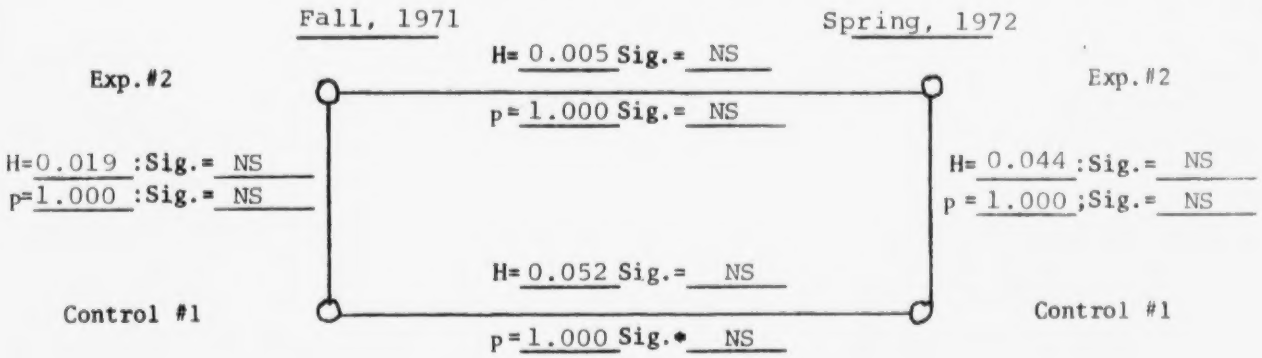
p =1.000 :Sig.= NS

Control #1

H= 0.052 :Sig.= NS

Control #1

p= 1.000 ;Sig.= NS


Fall, 1971

Spring, 1972

H= 0.005 Sig.= NS

Exp.#2

Exp.#2

p= 1.000 Sig.= NS

H=0.019 :Sig.= NS

p=1.000 :Sig.= NS

H= 0.044 :Sig.= NS

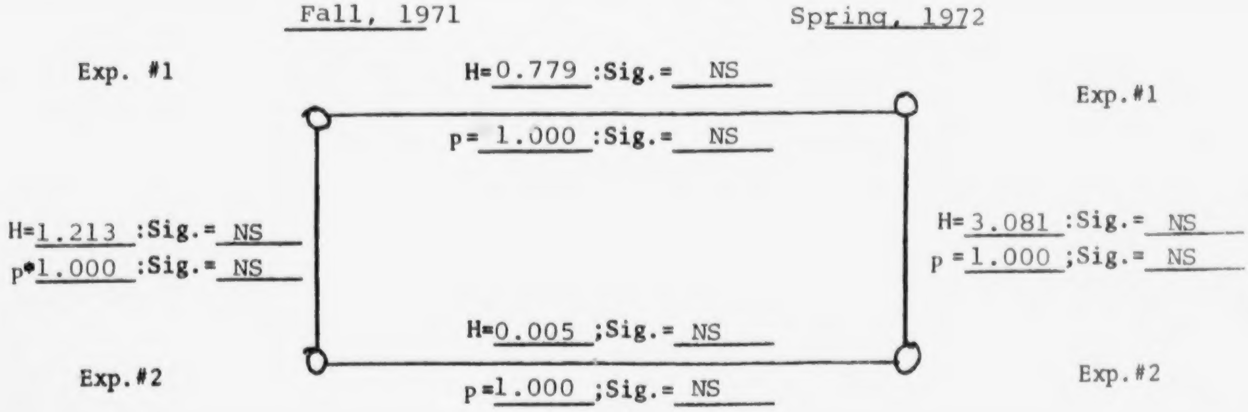
p = 1.000 ;Sig.= NS

H= 0.052 Sig.= NS

Control #1

Control #1

p= 1.000 Sig.= NS


Fall, 1971

Spring, 1972

Exp. #1

H=0.779 :Sig.= NS

Exp.#1

p= 1.000 :Sig.= NS

H=1.213 :Sig.= NS

p=1.000 :Sig.= NS

H=3.081 :Sig.= NS

p =1.000 ;Sig.= NS

H=0.005 ;Sig.= NS

Exp.#2

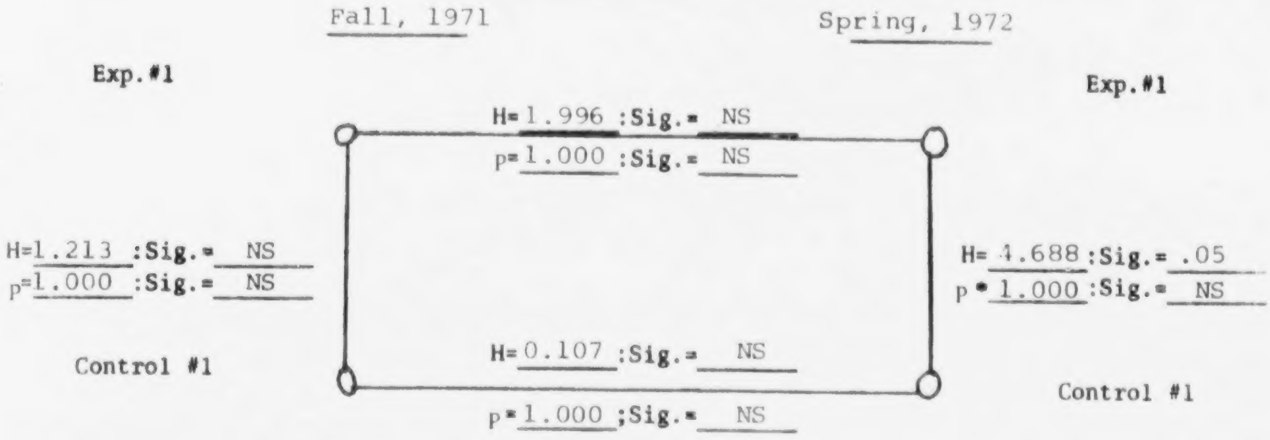
Exp.#2

p=1.000 ;Sig.= NS

CONTENT ANALYSIS DATA

Item 2 : Level of Progress toward those Objectives.

SCHEMATIC PRESENTATION OF ANALYSIS



Fall, 1971 — Spring, 1972

Exp.#1 — Exp.#1

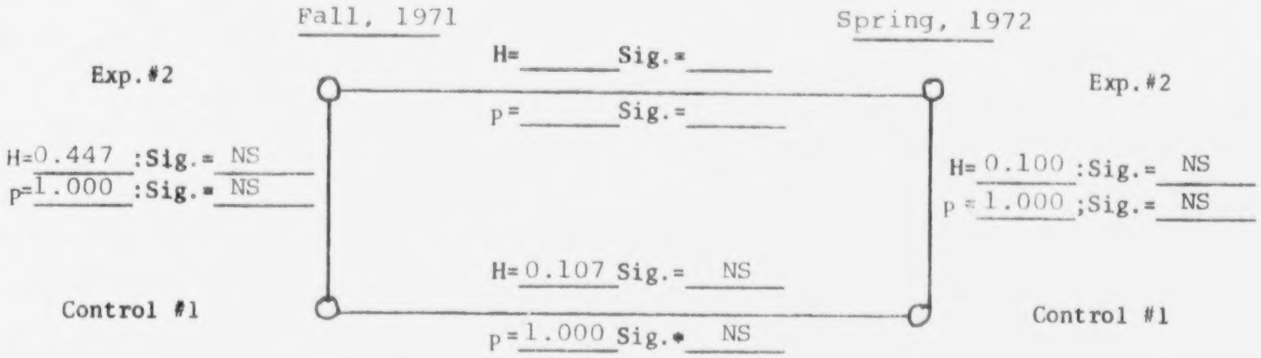
H=1.996 :Sig.= NS
p=1.000 :Sig.= NS

H=1.213 :Sig.= NS
p=1.000 :Sig.= NS

H=4.688 :Sig.= .05
p=1.000 :Sig.= NS

H=0.107 :Sig.= NS
p=1.000 ;Sig.= NS

Control #1 — Control #1



Fall, 1971 — Spring, 1972

Exp.#2 — Exp.#2

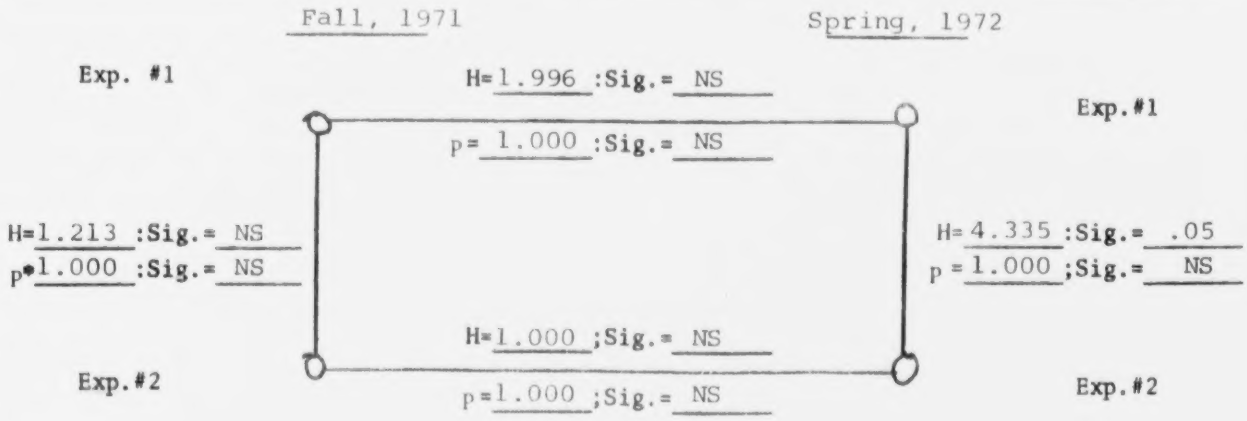
H= Sig.=
p= Sig.=

H=0.447 :Sig.= NS
p=1.000 :Sig.= NS

H=0.100 :Sig.= NS
p=1.000 ;Sig.= NS

H=0.107 Sig.= NS
p=1.000 Sig.= NS

Control #1 — Control #1



Fall, 1971 — Spring, 1972

Exp. #1 — Exp.#1

H=1.996 :Sig.= NS
p=1.000 :Sig.= NS

H=1.213 :Sig.= NS
p=1.000 :Sig.= NS

H=4.335 :Sig.= .05
p=1.000 ;Sig.= NS

H=1.000 ;Sig.= NS
p=1.000 ;Sig.= NS

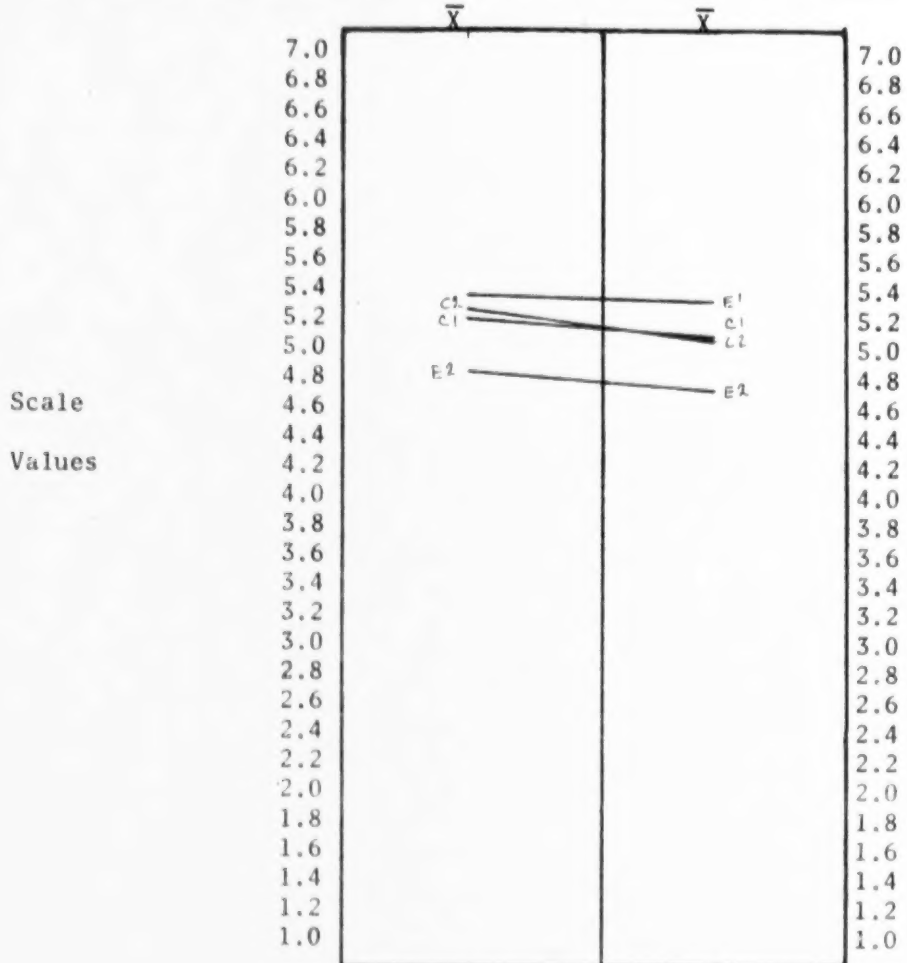
Exp.#2 — Exp.#2

Item 2 : Level of Progress toward those Objectives.

Fall, 1971	N	Kruskal-Wallis One-Way Analysis of Variance	Binominal Test of Proportions
Experiment#1 & Control #1	9 11	H= 1.213 Signif.= NS	P = 1.000 Signif.= NS
Experiment#2 & Control #1	10 11	H= 0.447 Signif.= NS	p = 1.000 Signif.= NS
Experiment#1 & Experiment#2	9 11	H= 1.213 Signif.= NS	P= 1.000 Signif.= NS
Spring, 1972			
Experiment#1 & Control #1	9 11	H= 4.688 Signif.= .05	P= 1.000 Signif.= NS
Experiment#2 & Control #1	10 11	H= 0.100 Signif.= NS	P=1.000 Signif.= NS
Experiment#1 & Experiment#2	9 10	H= 4.335 Signif.= .05	P=1.000 Signif.= NS
Fall 1971 to Spring, 1972			
Experiment #1 & Experiment #1	9 9	H= 1.996 Signif.= NS	p= 1.000 Signif.= NS
Experiment #2 & Experiment #2	10 10	H= 1.000 Signif.= NS	p= 1.000 Signif= NS
Control#1 & Control#1	11 11	H= 0.107 Signif.= NS	P = 1.000 Signif.= NS

QUESTIONNAIRE DATA

Item 3 As I see it, my organization has made progress in attaining its objectives.

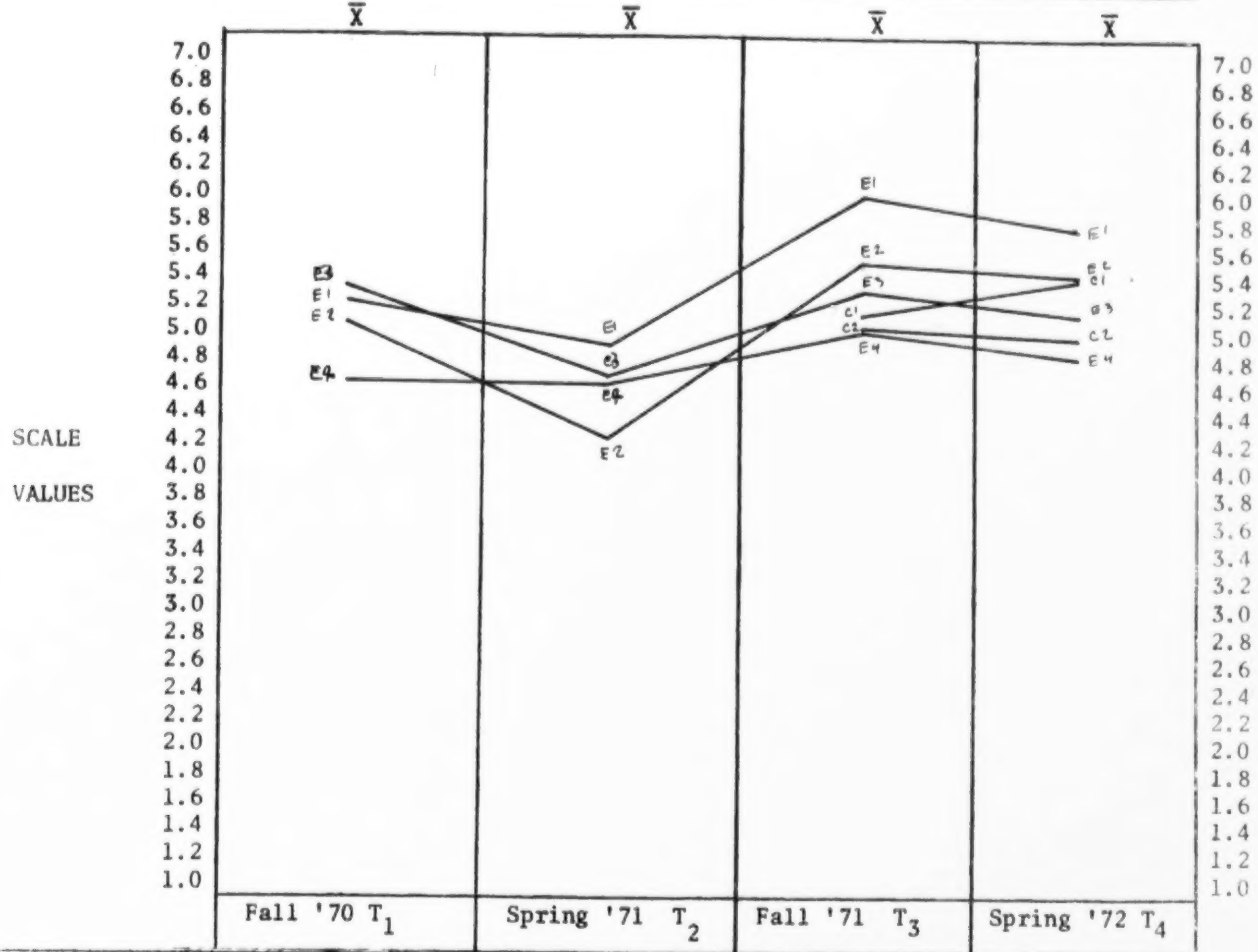


	Fall, 1971 T3			Spring, 1972 T4		
	N	X̄	SD	N	X̄	SD
Experimental SED#1	68	5.411	1.340	40	5.325	0.888
Experimental SED#2	45	4.866	1.341	40	4.775	1.349
Control SED#1	67	5.253	1.146	61	5.114	1.239
Control SED#2	61	5.295	1.256	66	5.090	1.063
Total	241			207		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment SED#1	Col.	0.504	NS
W/Control SED#1	Row	1.314	NS
Experiment SED#2	Col.	0.859	NS
W/Control SED#1	Row	1.248	NS
Experiment SED#1	Col.	0.430	NS
W/Control SED#2	Row	4.271	.05
Experiment SED#2	Col.	0.726	NS
W/Control SED#2	Row	4.596	.05

QUESTIONNAIRE DATA

Item 1 : My organization's overall plan is operable.

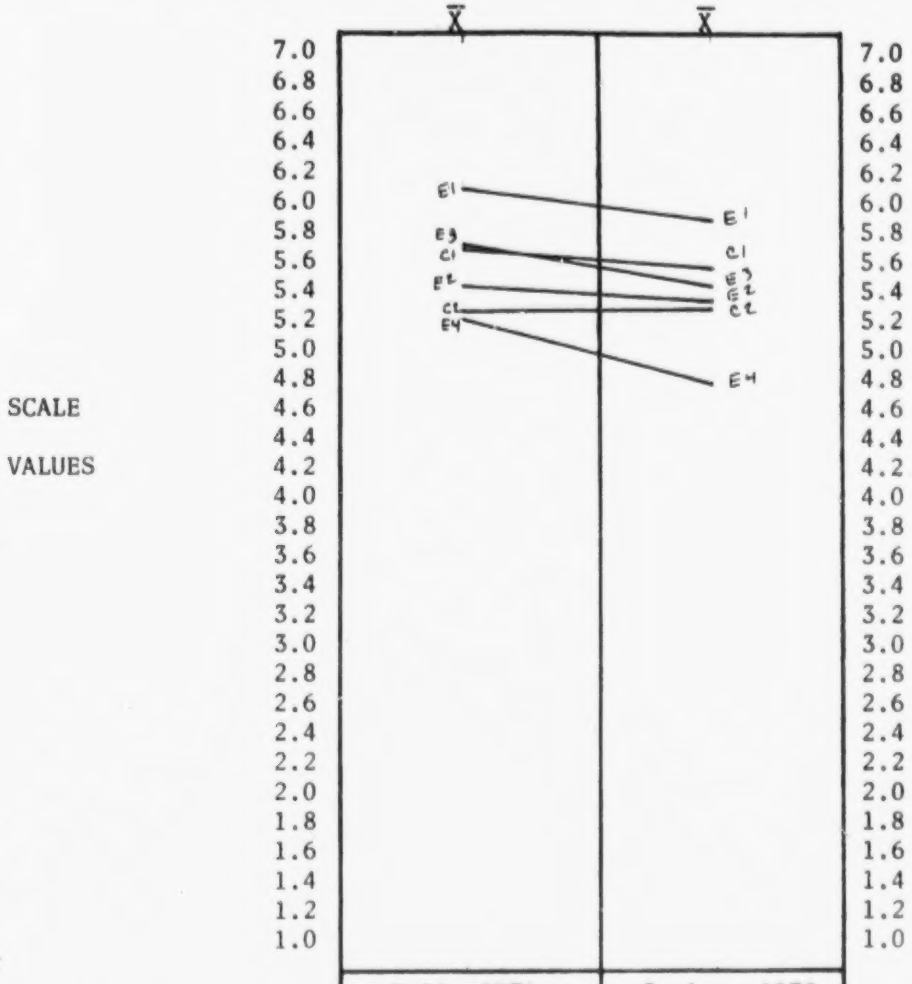


	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment LEA #1	28	5.250	1.174	25	4.920	1.552	32	6.031	0.932	31	5.806	1.077
Experiment LEA #2	38	5.105	1.180	26	4.269	1.313	31	5.548	1.23	32	5.437	0.948
Experiment LEA #3	33	5.363	1.112	17	4.705	0.985	24	5.333	0.816	23	5.173	1.072
Experiment LEA #4	27	4.666	1.330	23	4.652	1.721	29	5.034	1.426	27	4.851	1.610
Control LEA #1							30	5.166	1.39	20	5.450	0.944
Control LEA #2							36	5.083	1.40	33	5.000	1.322
Total	127			91			182			167		

Two-Way Anal.ofVar.		T1 & T2		T2 & T3		T3 & T4		T1 & T4	
		F	Signif.	F	Signif.	F	Signif.	F	Signif.
Experiment LEA#1 W/ Experiment LEA#2	Col.	5.762	.05	25.502	.001	0.799	NS	5.189	.05
	Row	2.681	NS	5.735	.05	5.148	.05	1.733	NS
Experiment LEA#3 W/ Experiment LEA#4	Col.	1.537	NS	3.322	NS	0.448	NS	0.000	NS
	Row	1.916	NS	0.405	NS	1.476	NS	4.174	.05
Experiment LEA#1 W/ Control LEA #1	Col.					0.018	NS		
	Row					8.202	.01		
Experiment LEA#2 W/ Control LEA #1	Col.					0.150	NS		
	Row					0.689	NS		
Experiment LEA#3 W/ Control LEA #2	Col.					0.278	NS		
	Row					0.849	NS		
Experiment LEA#4 W/ Control LEA #2	Col.					0.265	NS		
	Row					0.145	NS		

QUESTIONNAIRE DATA

Item 1 As I see it, my organization has made progress in attaining its objectives.



	Fall, 1971 T3			Spring, 1972 T4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experimental LEA #1	32	6.125	0.941	31	5.903	0.789
Experimental LEA #2	31	5.483	1.091	32	5.375	1.070
Experimental LEA #3	24	5.750	0.793	23	5.478	0.947
Experimental LEA #4	29	5.241	0.950	27	4.814	1.210
Control LEA #1	30	5.733	0.944	20	5.600	0.753
Control LEA #2	36	5.305	1.116	33	5.303	1.074
Total	182			166		

Two-Way Analysis of Var.		T3 & T4	
		F	Signif.
Experiment LEA#1	Col.	0.894	NS
W/Experiment LEA#2	Row	11.182	.001
Experiment LEA#3	Col.	3.156	NS
W/Experiment LEA#4	Row	8.892	.01
Experiment LEA#1	Col.	1.129	NS
W/Control LEA#1	Row	4.324	.05
Experiment LEA#2	Col.	0.403	NS
W/Control LEA#1	Row	1.548	NS
Experiment LEA#3	Col.	0.512	NS
W/Control LEA#2	Row	2.614	NS
Experiment LEA#4	Col.	1.193	NS
W/Control LEA#2	Row	1.978	NS

APPENDIX D

QUESTIONNAIRE

Directions

1. Read each statement carefully.
2. Then decide to what extent the statement accurately describes your work situation as it was last fall (September-December). Choose a number value on the scale which best shows how you felt then; write your choice on the left side of the page.
3. Next decide to what extent this same statement accurately describes your work situation as it is now. Choose the number on the scale which best shows how you feel this day and mark it on the right side of the page.
4. Be sure to indicate your feeling on all statements in both the past and present tense.

EXAMPLE

1 2 3 4 5 6 7

not at all fairly often very often

Last Fall Now

_____ 1. Our organizational plan is well formulated. (44) _____

---

* *

LAST FALL NOW

_____ 1. As I see it, persons in this organization put a lot of effort into planning. (58) _____

_____ 2. My manager knows and understands the problems I face. (59) _____

_____ 3. My manager recognizes when a problem is developing and does something constructive about it. (60) _____

_____ 4. My work is important to the future and quality of education in my state. (61) _____

1 2 3 4 5 6 7
not at all fairly often very often

LAST FALL NOW

_____ 5. When differences arise in my work group, we have good ways for settling them ourselves. (62) _____

_____ 6. I think that my work group has made progress in attaining the objectives set for us. (63) _____

_____ 7. I think that the right strategies are chosen to implement the objectives of my organization. (64) _____

_____ 8. The planning unit has been helpful to me. (65) _____

_____ 9. My organization's overall plan is operable. (66) _____

_____ 10. In this organization good job performance is appropriately rewarded. (67) _____

_____ 11. I feel loyal to my organization and identify with it and its objectives. (68) _____

_____ 12. My capability to plan effectively will positively affect my future career in this organization. (69) _____

_____ 13. People here are open and honest in talking with each other. (70) _____

_____ 14. I am given appropriate opportunities to gain more technical knowledge about my job. (Cd. 2) (01) _____

_____ 15. My organization has reliable ways for knowing how well it is attaining its objectives. (02) _____

_____ 16. My manager understands planning theory and is able to put it into practice. (03) _____

_____ 17. The policy and objectives of this organization are understood and supported by its members. (04) _____

1 2 3 4 5 6 7

not at all fairly often very often

LAST FALL NOW

_____ 18. I have good ways for knowing how good our results are. (05) _____

_____ 19. My organization's performance standards which are used to evaluate how well we are achieving our objectives are understood. (06) _____

_____ 20. I believe that all persons or groups who should have participated in the development of objectives did participate. (07) _____

_____ 21. My manager encourages and supports innovation. (08) _____

_____ 22. I feel my group works together well. (09) _____

_____ 23. I am able to affect decisions relating to planning. (10) _____

_____ 24. The top priority objectives for state education are clear to me. (11) _____

_____ 25. Based on information I have received from my manager, I know if I am measuring up in my job. (12) _____

_____ 26. I can influence the goals, methods, and activities of my organization. (13) _____

_____ 27. I understand what results must be produced to achieve the stated objectives of this organization. (14) _____

_____ 28. The kinds of things I am doing will make a long term contribution to education. (15) _____

_____ 29. I think that people in this organization are generally favorable toward it and support behavior implementing its objectives. (16) _____

_____ 30. My manager shows confidence and trust in me. (17) _____

_____ 31. I really feel my immediate work group is getting things done. (18) _____

1 2 3 4 5 6 7
not at all fairly often very often

LAST FALL NOW

_____ 32. As I see it, planning is an integral part of running the state's schools. (19) _____

_____ 33. Our goals are realistic and attainable with our best efforts. (20) _____

_____ 34. I feel that the appropriate persons and groups have been involved in the development of objectives for this organization. (21) _____

_____ 35. I find my work personally rewarding and meaningful. (22) _____

_____ 36. I believe my organization gives me adequate training to do my work effectively. (23) _____

_____ 37. The work I do makes good use of my abilities. (24) _____

_____ 38. People in my group have the technical knowledge to do the job. (25) _____

_____ 39. As I see it, my organization has made progress in attaining its objectives. (26) _____

_____ 40. I am appropriately involved in decisions affecting my work. (27) _____

_____ 41. Higher management's reactions to the problems which reach them are fair. (28) _____

_____ 42. The activities relating to planning are having an effect on the policy of this organization. (29) _____

_____ 43. I and my manager work well together. (30) _____

_____ 44. My work group understands what we are trying to achieve. (31) _____

_____ 45. I feel good about my manager's ability to plan. (32) _____

_____ 46. My group works hard to achieve its goals. (33) _____

1 2 3 4 5 6 7

LAST FALL NOW

_____ 47. My manager makes it clear that he is committed to the success of our projects. (34)_____

_____ 48. As I see it, my organization is moving in the right direction. (35)_____

_____ 49. The goals of this organization are articulated. (36)_____

_____ 50. Good ways are used to let me know how I can improve my performance. (37)_____

_____ 51. The people I work with participate appropriately in setting the goals of our work. (38)_____

_____ 52. My organization's policy statements are clear. (39)_____

_____ 53. My manager provides me with adequate support to perform my job. (40)_____

_____ 54. My manager has expressed the belief that the AMA's training program has been helpful. (41)_____

_____ 55. I think that the objectives developed during AMA training are clearly stated with regard to results expected. (42)_____

_____ 56. I feel that the objectives developed during AMA training reflect the most serious and pressing needs of state education. (43)_____

_____ 57. As I see it, the operational priorities of the objectives developed during AMA training are clear. (44)_____

APPENDIX E

INTERVIEW CONTENT CODING INSTRUMENT

Question #1

What do you feel you (will obtain) (obtained) from the AMA training?

pre-training post-training

Intensity Scale

0 uncodeable (no answer)
1 no value
2
little value
3
4 included as circumstances permit
5
significant should be stressed
6
7 maximum commitment

	Domains	Column Number	Score
1.	definition of the institution's mission	1	______
2.	modify previously established objectives	2	______
3.	identify and analyze alternative courses of action	3	______
4.	determine priorities	4	______
5.	define standards of performance for key administrators	5	______
6.	specify task completion dates and action assignments.	6	______
7.	assign responsibilities to subordinate units	7	______
8.	design a methodology by which future performance may be evaluated in relation to the performances specified in the plan	8	______
9.	produce and implement a long-range strategic plan	9	______
10.	establish credibility of planning	10	______
11.	promote free flow of information throughout SED	11	______
12.	promote cooperative team work	12	______

Question #2

Do you feel that the objectives developed as a result of AMA training reflect the most serious and pressing needs of state education?

Domain

Question acts as domain
in this case.

		Intensity Scale	
13.	0	uncodeable (no response)	13 ______
	1	not at all	
	2		
	3		
	4	to some extent	
	5		
	6		
	7	definitely	

Question #3

How are major decisions made in the State Department?

Domains

Question acts as domain in this case.

	Intensity Scales		Column Number Score
34.	[A] Involvement	[B] Quality	34 ______
35.	0 uncodeable (no response)	0 uncodeable (no response)	35 ______
	1 no participation/no discussion invited. Decision-making only at top.	1 never effective	
	2	2	
	no participation/some discussion invited. Decision-making at top.	seldom effective	
	3	3	
	4 some participation as circumstances permit. Decision-making mostly at top.	4 sometimes effective	
	5	5	
	significant participation/broad policy at top	usually effective	
	6	6	
	7 maximum participation throughout SED	7 highly effective	

Question #4

What is the role of planning in running the State's school system?

Domain

Question acts as domain

*52 [A] Role of Planning

0 uncodeable (no answer)

1 no value
2
little value
3
4 used as circumstances permit
5
significant
6
7 integral part

*53 [B] Need for Planning

0 uncodeable (no answer)

1 no value--should not be used at all
2
little value--should be used less
3
4 used about as much as it should be
5
significant--should be used more
6
7 everything should be thoroughly planned

Column Number Score

A) ________

B) ________

C) ________

*54 [C] Emergence of Planning

0 uncodeable (no answer)

1
2 still not used
3
4
recent development
5
6 long-standing practice
7

Question #5

Is planning influencing the decision-making process within the State Department of Education?

Question acts as domain in this case.

	Intensity Scale	Column Number Score
16.	0 uncodeable (no response)	16 _______
	1 no influence	
	2	
	little influence	
	3	
	4 some influence	
	5	
	significant influence	
	6	
	7 integral part of decision-making process	

Question #6

How has the planning unit helped you to plan?

Domain

17. awareness of need to evaluate our programs
18. available to answer planning questions
19. writing guidelines for plan development
20. reviewing and refining plans
21. provides leadership in the implementation of planning
22. provides in-service training in planning

Intensity Scale

0 uncodeable (no response)
1 no help
2
3
4 some help
5
6
7 great help

17. ______
18. ______
19. ______
20. ______
21. ______
22. ______

Question #7

Toward what action plan objectives has measurable progress been made by your division?

Domains

Question acts as domain in this case.

23. [A] Number of objectives toward which progress has been made.	24. [B] Level of progress toward those objectives.	25. [C] Time as a factor in level of progress
0 uncodeable (no response)	0 uncodeable (no response)	0 uncodeable (no response)
1 no objectives	1 no progress	1 no importance
2	2	2
3	3	3
4 some objectives	4 some progress	4 some importance
5	5	5
6	6	6
7 many objectives	7 much progress	7 very important

23 _____

24 _____

25 _____

Question #8

How do you feel about the direction your organization is moving?

	Domain		Intensity Scale	Column Number Score
51.	Question acts as domain in this case.	0	uncodeable (no answer)	51. ______
		1	not satisfied at all	
		2		
		3	slightly satisfied	
		4	mostly satisfied	
		5		
		6	completely satisfied	
		7		

Question #9

What changes in the planning process or in the action plan itself do you feel necessary at this time?

Domains

26. Increased involvement of professional staff with planning
27. Adjustment of org. structure and functions to fit plan
28. More time away from routine duties for planning
29. More efficient use of man power in division-level planning
30. Less lead time between planning and implementation
31. Less talk about planning and more actual planning
32. Communication and coordination
33. Greater involvement in LEA's

Action Plan

55. Priorities established among objectives
56. Cost estimates attached to objectives
57. Addition of evaluation strategies
58. Operational definitions of terms used in objectives
59. Assigned responsibilities for implementation
60. General revision of plans

Intensity Scale

0 uncodeable (no response)

1 maximum change
2
significant change
3
4 moderate change
5
slight change
6
7 no change

26. ____
27. ____
28. ____
29. ____
30. ____
31. ____
32. ____
33. ____
55. ____
56. ____
57. ____
58. ____
59. ____
60. ____

Question #10

What are the roadblocks to change in this organization?

	Domains	Column Number Score
36.	organization reacts to problems rather than anticipates and deals with problems	36. ______
37.	public relations (role of pressure groups)	37. ______
38.	adequate resources (money and information)	38. ______
39.	control system expressed through decision-making process	39. ______
40.	sense of SED mission	40. ______
41.	employee interpersonal skills	41. ______
42.	amount of cooperative teamwork present	42. ______
43.	informal power groupings supporting or opposing goals of formal organization	43. ______
44.	degree to which persons within organization will support change	44. ______

Intensity Scale

0 uncodeable (no answer)
1 major roadblock/always stops change
2
significant roadblock/usually stops change
3
4
occasional roadblock
5
6
7 weak roadblock/seldom stops desired change

12. What specific methods do you use to determine if the continuing and specific objectives of your division are being met?

Domains

4. client satisfaction surveys (opinion polls, review of media commentaries) 4 ______
5. custom made tests 5 ______
6. independent evaluators 6 ______
7. informal feedback 7 ______
8. performance reviews (interviews, meetings) 8 ______
9. product analysis (inspecting and rating of products which students have made, e.g., handwriting, drawings, projects or which administrators have developed, e.g., plans, job descriptions, reports) 9 ______
10. questionnaires 10 ______
11. standardized tests 11 ______
12. task completion inventories (money appropriated, reports completed, training sessions given, plans turned in) 12 ______
13. unobtrusive measures (observations, organizational documents) 13 ______
14. written progress reports 14 ______
15. index combining multiple indices (production functions) 15 ______

0 uncodeable

1 minimum use
2
3
4 moderate use
5
6
7 maximum use

11. Have performance standards been established for your subordinates based on the objectives in your division plan?

12. Do you have regular performance reviews with your subordinates?

Question acts as domain

Column Number Score

1) _____

2) _____

3) _____

(1) Extent of Use

0 uncodeable (no response)

1 none at all
2
3
4 to some extent
5
6
7 definitely

(2) Need for Performance Standards

0 uncodeable (no response)

1 no value--should not be used at all
2
3 little value--should be used less
4
5 should be used more
6
7 should be used much more

(3) Existence of Performance Reviews

0 uncodeable

1 still not used
2
3
4 used to some extent
5
6
7 regular performance reviews held